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Supply Network Management in Emerging Markets

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- *The Case of Volvo Bus Corporation in China* -

Aurélie Devidal & Kun Han

Graduate Business School
School of Economics and Commercial Law
Göteborg University
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ABSTRACT

Following the global business development of the MNCs, the presence of the MNCs in the emerging markets has led to quick transfers of manufacturing capacity to these markets. However, limited technological capacity and innovative ability are still the main characteristics of these markets. How to take advantage of the local competitive advantages and maximise the use of local resources and capabilities of the suppliers are therefore the challenging issues for the MNCs.

The aim of this thesis is to investigate the current market situation in the emerging market and to analyse how MNCs adjust their supply network with regard to the economy transition of emerging markets. To that purpose, we have used one of Volvo Bus Corporation joint ventures in China – Silver Bus Corporation (SBC) as our case company.

The complexity and dynamism of the Chinese bus market poses several challenges to MNCs. In order to present an overview of market situation and industry environment, we briefly investigate the macro and meso environment of China and bus industry. We then focus on the supply network management of SBC in China. By analysing its sourcing strategy and supplier relationship, we identify SBC's current supply structure in China. We finally present how SBC could modify its supply network by organizing its sourcing strategy and its suppliers' relationship.

Key words: China, Bus Industry, Sourcing Strategy, Supplier Relationship, Supply Network Management

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Aurélie Devidal

Kun Han

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LIST OF ABBREVIATIONS

FDI - Foreign Direct Investment

JV – Joint Venture

GDP – Gross Domestic Product

MNC - Multinational Corporation

M&A – Merger and Acquisition

SBC – Silver Bus Corporation

SOE – State Owned Enterprise

SQA - Supplier Quality Assurance

VBC – Volvo Bus Corporation

WTO – World Trade Organisation

XAC – Xi'an Aircraft Corporation

Chapter 1. INTRODUCTION

In this chapter we present the background of the thesis, and provide an overview of the research problem and purpose of this thesis. We then discuss the delimitations and, finally, an outline for the thesis is presented.

1.1. BACKGROUND

The globalisation of the business environment has served the Multinational Corporations (MNCs) with several challenges, as well as opportunities. The main drivers behind the globalisation process are the increased deregulation of world trade, rapid development of new technologies and large privatisation processes worldwide.¹ As a result, this has boosted the rise of MNCs with global presence.

Following the present day globalisation and liberalisation of the economy, the emerging markets are becoming more and more attractive for MNCs, promising huge market opportunities and labour cost advantages at a global economic stagnant time.

Together with the global business development of MNCs, especially in the new emerging markets, MNCs' way of performing and their strategies towards the new emerging markets are of great importance for them to develop. MNCs today are increasingly focusing on their core competencies, consigning to their suppliers activities such as the delivery of components and subassemblies. This phenomenon is especially important in the automotive industry. It has thus resulted in an increasing dependence on suppliers, placing, to some extent, more responsibility on them.²

The focus of our attention in this research is therefore on the particular issues of MNCs supply network management in the new emerging market with a special emphasis on the automotive industry in China.

¹ Boyd, Walker & Larreche, 1998

² Alvstam & Ivarsson, 2001

1.2. RESEARCH PROBLEM

1.2.1. Research Background

Accompanying the presence of the MNCs in the new emerging markets, the manufacturing capacity has rapidly dispersed from developed countries to the new emerging markets. However, many developing countries possess a limited technological capacity in terms of product innovation and development. Upgrading the local suppliers through technology transferring in order to maximum utilise the local resources and capabilities of the suppliers is therefore the challenging issue for the MNCs.

Accordingly, the relationships between MNCs and their suppliers are believed to be of value for MNCs willing to act in the new emerging markets. The issues of sourcing strategy, supplier relationship and building supply network have become important for MNCs since those can benefit to their performance in the new emerging market in a long-term thinking.

As one of the most attractive emerging markets in the world, China is, by far, not only impressive because of its market potential, but also by its remarkably growing economy and rapidly developing infrastructure. The continuous development of the Chinese economy during the last twenty years offers favourable perspectives to MNCs. The recent WTO membership of this country even implies a more opened market for the MNCs.

When discussing these challenging issues, the way MNCs take advantage of the local competitive advantages and keep sustainable development were the questions in which we were interested. The issue of their supply network management was of special importance for us.

Given our interest in such issues, we were provided with the opportunity to get involved in a project with Volvo Bus Corporation (VBC). The aim of this project is for Volvo to identify the supplier structure and develop cooperative relations between its two joint ventures in China and their suppliers. VBC intends to achieve better production volume in terms of quality level and cost reduction values by consolidating negotiation processes.

1.2.2. Problem Definition

In this section, we present how the main research problem and sub research problems have been defined.

Main Problem:

How do MNCs adjust their supply network, when operating in the new emerging markets?

We link this problem with our case company VBC in China, which leads to the following research problem:

How does Volvo Bus Corporation adjust its supply network in Chinese automotive industry?

In order to answer the above main research problem, we identify and investigate three sub research problems:

1. *What is the current market situation in the Chinese automotive industry especially in the bus segment?*

To be able to give an overview for the current situation of the Chinese automotive markets, especially the bus segment, analysis of the societal factors and industry are necessary since societal factors and industry situation have great influences on the supply network of automotive MNCs. The general picture of the situation in China's macro environment and automotive industry, especially in the bus segment, therefore functions as a background for understanding the current sourcing strategy of the MNC.

2. *What is the current sourcing strategy of VBC in the Chinese Bus industry?*

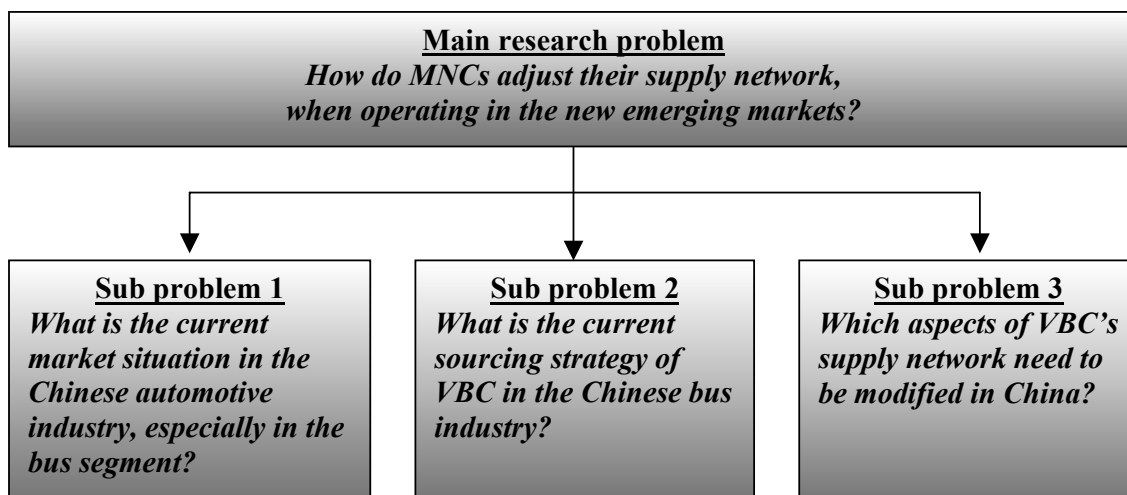
In order to solve our main research problem, we have to analyse the current sourcing strategies of VBC in Chinese bus markets. The existing sourcing strategy and supplier structure of VBC will especially be assessed by sourcing strategy, supplier relationship and supply network building analysis. Understanding the VBC's current sourcing strategy provides the possibility to see how VBC adjusts its sourcing strategy according to the market situation in China.

3. *Which aspects of VBC's supply network need to be modified in China?*

Here we aim to identify and analyse the main aspects of VBC's supply network, which need to be modified due to the fact that VBC is in China - a quick changing market. The current sourcing strategy of VBC, its supplier relationship and supply network will be studied with regard to China institutional particularities.

Finally, our research problems are summarized in Figure 1.1.

Figure 1.1 Research Problem Model



Source: authors

1.3. PURPOSE

The main purpose of our research is to analyse how MNCs adjust their supply network with regard to the emerging markets' economy transition. VBC is used as a case company. Based on the understanding of the current market situation in Chinese automotive industry, especially the bus segment and the existing sourcing strategy of VBC in China, we try to assess which aspects of VBC's supply network need to be modified in Chinese bus market. The empirical study concentrates on the business relations between VBC and its local component suppliers in China.

1.4. DELIMITATIONS

China was chosen as an example of emerging market to assess the supplier network structure of MNCs. We concentrate on the bus segment of automotive

industry in which VBC is involved, other segments of automotive industry could not be analyzed in-depth.

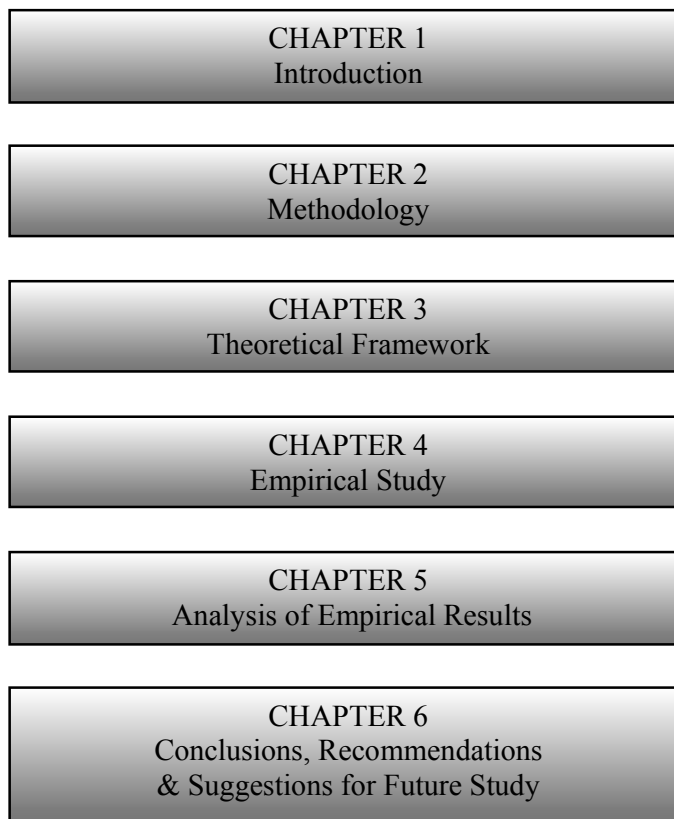
We will focus our research on companies producing in China, and especially on local suppliers, while trying to understand what is the current sourcing strategy of VBC and what is its existing supplier structure,

Geographically, our field study concentrates on Xi'an area since this is the place, where our case company, VBC, has one of its two joint ventures – Silver Bus Corporation (SBC) and the region, where its suppliers are relatively concentrated.

1.5. OUTLINE OF THE THESIS

In this section, the outline of our thesis is presented by the following Figure 1.2.

Figure 1.2 The Outline of our Thesis



Source: authors

Chapter 2. METHODOLOGY

The purpose of the following methodology chapter is to present, explain and justify the methods and processes we have used while conducting our research. In each section, a theoretical definition precedes the description and discussion of our own methodology. To explain the course of action that we have used, a short description of our research strategy is first given, followed by two sections dedicated to the data collection and the quality research.

2.1. RESEARCH STRATEGY

When approaching the problem we identify as central to our thesis, the first step is to search for valid theories and relevant materials. To further explore the subject, we decided to conduct a single case study research strategy through which we could, as defined by Yin, “reach a standing point, and properly combine both theoretical and practical settings”.³ We believe that by applying the developed theories to a specific case, precious value to our work can be added.

Our main goal when doing this study is to get an overview of our subject as holistic and objective as possible. We therefore conducted many interviews within and outside our case company so as to see our subject under different perspectives and add a new dimension to the information we already had.

2.2. DATA COLLECTION

We have collected data from two basic sources: primary and secondary sources. The differences between the two data types and the way we applied them in our thesis is described as follows.

2.2.1. Primary Data

Primary data is the information collected for the first time with the purpose of pointing out a specific case. It can be obtained through several techniques such as observations, interviews and surveys.⁴

The main technique for collecting primary data in our thesis is through interviews. We used unstructured and semi-structured interviews. Our case company being VBC, we first directed our interviews at the VBC assembly

³ Yin, 1994

⁴ Kinnear & Taylor, 1996

plant located in Borås, Sweden. The focus of our study however being the Chinese bus industry, we decided to go to China for a three weeks field trip.

We organized our field trip within two Chinese regions that were the most connected to our study, i.e. the Shaanxi province and Beijing. In the Shaanxi province we spent our first week in the city of Yanliang where the SBC, Joint Venture of VBC is located. We interviewed there SBC's employees and suppliers. Still in the Shaanxi province, we then extended our supplier interviews during the second week to Xi'an, the capital of the province. We went to Beijing for the third week in order to complete our suppliers' interviews by visiting suppliers and some Chinese professional associations.

Before going to China, we knew that it would not be materially possible to visit all SBC's suppliers given the limited time we had for our field trip. Before leaving, we therefore did a first suppliers selection based on a supplier list that SBC had provided to us. We then adapted our selection when we were in China.

Before each interview, a list with our main questions was provided in English or Chinese to the interviewees. While some interviews were directed in English, most of them have been in Chinese since we were focusing on local Chinese suppliers. We tape-recorded the interviews taken in English, and took written notes for the others. After each visit to the suppliers an interview report was taped so as to update our empirical data. If needed, questions were also reviewed, mostly in order to make them more relevant regarding the information we needed.

2.2.2. Secondary Data

The data is of second hand information which it has already been used by someone else and for a different goal.⁵ Secondary data is mainly used as a starting point for a study in order to get a quick overview of the subject.

Written material has been of utmost importance when starting our study. We found it relevant to start our study with the literature we had read during our classes in International Business. To deepen our point of view regarding the subject, we then looked for other books and articles at the library as well as on

⁵ Merriam, 1998

Internet. The data we collected by that way were mainly scientific articles or consultancies from specialized reviews.

Our field trip has also been of importance when it comes to secondary data collection. Being in China gave us the opportunity to collect data that we could not have had access to while in Sweden. We thus gathered some additional information concerning the market in general, and some more specific information concerning the suppliers mainly through their brochures. We finally kept going through some of our information sources during our writing process so as to update our data.

2.3. QUALITY OF RESEARCH

2.3.1. *Validity*

The concept of validity includes two levels of meaning: internal and external validity. The internal validity refers to how well the findings match reality and the external validity concerns the extent to which the findings are possible to generalize from the case study.⁶

We applied triangulation as one method to secure the internal validity. Multiple sources of data and investigation are used to confirm our findings. Working in close cooperation with SBC helped us, for instance, to constantly verify the information we were gathering and thus get closer to reality.

Since we are directing a qualitative research study, the fact that we have a single case study is not an obstacle to external validity. The generalization we tried to achieve is more on an analytical than on a statistical level. We furthermore believe that the findings of our study can be applied to other MNCs in the automotive industry if they focus on the Chinese market.

2.3.2. *Reliability*

The reliability of a study measures the extent to which research findings can be reproduced if the same study was conducted again under the same circumstances by another investigator.⁷ If any interpretation mistakes are conducted, the results are then less reliable. An investigation with good

⁶ Merriam, 1998

⁷ Yin, 1994

reliability should therefore not be affected by whom it is conducted or by the surrounding circumstances.

In qualitative research however, such a reliability level is generally not possible to reach, due to the researchers subjective interpretations. Accordingly, in case studies, reliability depends more on whether the results are consistent or not with the collected data.

To enhance the reliability of our study, all the written material had to be easily retrieved and come from reliable sources. To avoid our own subjectivity having too much of an affect on our interviewees, or our analysis, an interview guide had been carefully constructed in a way that the questions were not leading but rather serving as a base for broader discussions. Furthermore, the use of semi-structured interviews allowed us to clarify possible uncertainties during the interviews. Finally, to decrease the negative effects caused by possible languages differences and misunderstandings, we constantly discussed the information gathered to be sure to have perceived it the same way.

Chapter 3. THEORETICAL FRAMEWORK

In this chapter we describe the models and theories we have used throughout our research. They structured our thinking process and were used as a basis when analysing our findings. Two models and one theory have been selected for that purpose. The basic institutional model, the industry analysis model and the supply network theory are here developed. Finally our research model is presented.

3.1. THE BASIC INSTITUTIONAL MODEL

To better approach the MNCs international strategic management in emerging markets, we are adopting an institutional network approach as described by Professor Hans Jansson, in his book manuscript “*Basic Institutions Model*”.⁸

The international strategy literature often focuses on national markets and industries issues excluding the larger business environmental factors. The operations of MNCs in host countries are thus studied with the implicit assumption that their business environment is similar to the one of emerging markets. The belief is that MNCs could basically operate the same way in emerging market economy as in fully developed market economy. We know however that if the emerging markets are quickly approaching the Western mature markets, their business environment strongly differs. This, in turn, has important implications on the strategy and the organisation of MNCs since the international competitiveness of enterprises mainly depends on their capacity to better exploit market opportunities.

The institutional network looks upon the MNC as an institution and as a network.⁹ It emphasises on a common understanding that the MNC does not stand-alone in the world but is highly dependent on the international environment in which it operates. By explicitly basing analysis on differences between environments, the institutional network approach allows to study the impacts of the business environment on MNCs and to relate them to strategic options and international strategies of the MNCs.

From an institutional network perspective, society is divided into different social groupings and agents characterised by different regularities or rules that

⁸ Jansson, 2002

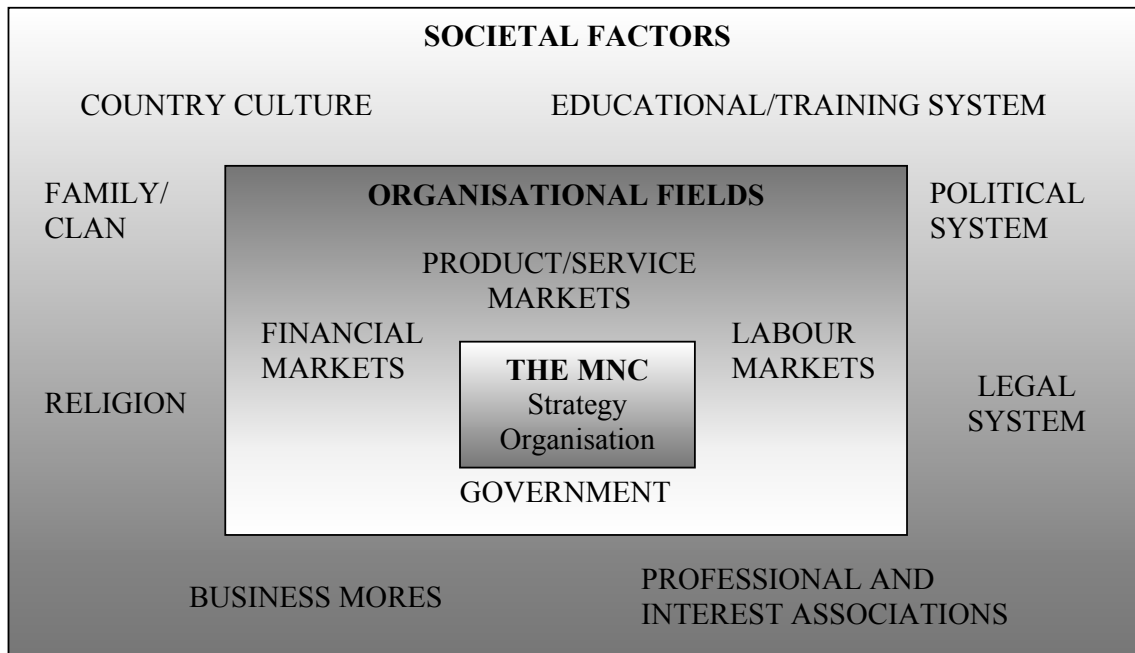
⁹ Ibid.

are influencing each other and are called “Institutions”.¹⁰ As illustrated in the following Figure 3.1, the institutional world is looked upon from the perspective of one central institution: the MNC. This focused micro institution is to be found at the centre of a framework and is surrounded by the institutions impacting on it.

The influencing institutions are segmented into two major groupings: the organisational fields and the societal sectors. Organisational fields comprehend institutional agents at the micro level and structures at the meso level. Organisational fields commonly have four major meso institutions. Three market institutions (the product/services, the financial and the labour market) are sharing common norms and rules while the government institution, composed of ministries and authorities, is sharing common frames of reference and ways of acting.

At the macro level, societal sectors are always described as structures. The essential macro institutions, which are broad ways to organise society, are the political system, legal system, the professional and interest associations, the business mores, the family/clan, the religion, the country culture, and the educational and training system.

¹⁰ Jansson, 2002

Figure 3.1 The Basic Institutions Model

Source: (Jansson, 2002)

If the influences between the organisational fields and the MNCs are of a direct and two-way nature, the influences of the societal sectors on the MNCs are mainly indirect and one directional. In every country these meso and macro institutions are linked to each other in a certain way, which is creating a specific business environment organised as a unique institutional framework.¹¹

By identifying and describing the institutions that are relevant to a specific country, the impact of societal organisations on the MNC can be studied and the way they affect each other can be better understood. The environment of an enterprise is an “external institutional set-up” within which the enterprise conducts its business. To be successful from an international strategic standpoint, the “internal institutional set-up” of the enterprise will have to fully match the requirements of the external one.¹² It is at this explanatory stage that we can benefit most from the institutional theory and better comprehend the business environment of one country, its potential future evolution and its possible impact on MNCs.

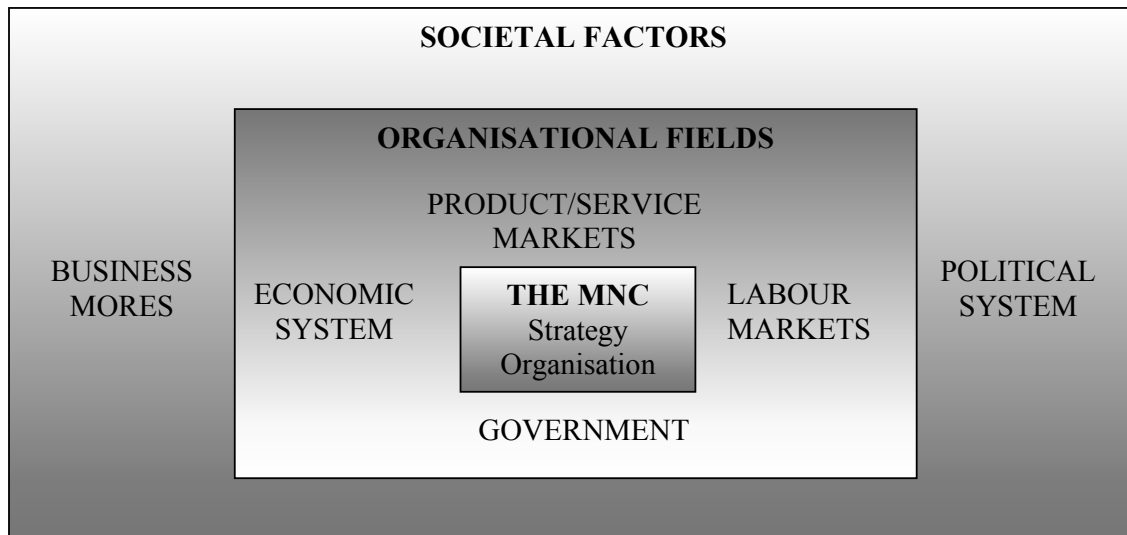
¹¹ Jansson, 2002

¹² Ibid

3.1.1. Modified Institutional Model

The basic institutional model was developed for companies trying to penetrate the emerging market. It can be further modified according to different industries and countries. In our case, the institutions were viewed from the perspective of our case company – VBC in China and the basic institutional model was therefore modified as shown in Figure 3.2.

Figure 3.2 Modified Institutional Model



Source: Jansson, 2000, Modified

3.2. THE INDUSTRY ANALYSIS MODEL

We adopt Porter's Five Forces of Competition Framework to analyse the competitive environment of the industry. As a widely used framework for identifying and analysing the competition and profitability of the industry, Porter's Five Forces model diagnoses the industry structure by explaining the sustainability of profits against bargaining and against direct and indirect competition. This model involves a relationship between competitors within an industry, potential competitors, suppliers, buyers and alternative solutions. Understanding the current competitive forces and anticipating which are the most important forces in the future is critical in shaping a firm's strategy. Therefore, we considered Porter's model as appropriate in our case.

According to Porter's model, the competition of the industry consists of three sources of "horizontal" competition from substitutes, entrants and established rivals, and two sources of "vertical" competition, which are bargaining power

of suppliers and buyers (see Figure 3.3). The strength of each of five forces is determined by a number of key variables, which are further developed as follows.¹³

➤ **Bargaining Power of Suppliers**

The firms in an industry operate in two types of markets: the inputs markets, where they purchase from the suppliers and the outputs markets, where they sell to the customers. The relative profitability of a transaction is decided by comparing economic power. Bargaining power of suppliers discusses the relative power between the producers in an industry and their suppliers. This depends on supplier concentration, substitute supplies, switching costs, threat of forward integration, and buyer information.¹⁴

➤ **Bargaining Power of Buyers**

Bargaining power of buyers contains the following major factors of buyer concentration, buyer switching costs, buyers' price sensitivity, volume and threat of backward integration, which determine how much the buyers can influence the company's actions.

➤ **Competition from Substitutes**

The existence of close substitutes provides the possibility for customers to switch to substitutes in response to price increases for the product. The extent to which substitutes influence prices depends on the buyer propensity to the substitutes. Therefore, buyer propensity to substitutes and relative price performance of substitutes are two main variables for assessing the competition from substitutes.

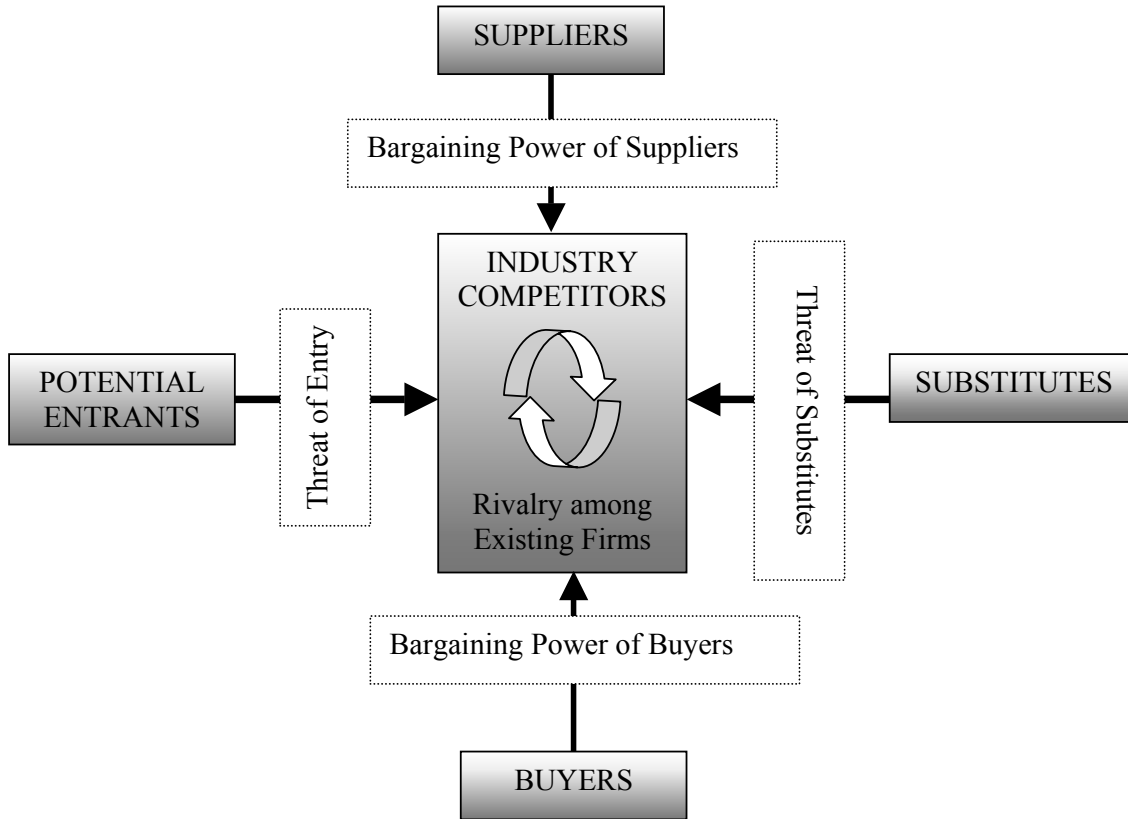
➤ **Treat of Entry**

The threat of entry describes the barriers for an establishment within the industry. The size of the advantage of established over entrant firms determines the height of barriers to entry. The principal sources of barriers to entry consist of capital requirements, economies of scale, cost advantages, product differentiation, access to channels of distribution, governmental and legal barriers and retaliation.

¹³ Grant, 1998

¹⁴ Bowman & Devinney, 1997

Figure 3.3 Porter's Five Forces of Competition Framework



Source: Grant, 1998

➤ Rivalry Between Established Competitors

The competition among the established firms within the industry is the major determinant for the overall competition of the industry. It consists of six factors of concentration, diversity of competitors, product differentiation, excess capacity, exit barriers and cost conditions.

Based on the understanding of Porter's Five Forces of Competition Framework, we will apply this model to our industry analysis part. Considering our research problem, we are however paying more attention to the analysis of the suppliers' bargaining power in our research.

3.3. THE SUPPLY NETWORK THEORY

When it comes to supply network issues, we mainly base our study on the supply network theory as developed by L-E.Gadde and H. Håkansson in their

book “Supply Network Strategies”.¹⁵ By emphasising the sourcing strategy and supplier relationship management, their theory provides the basis for designing and evaluating the supply network. Their supply network theory mainly consists of three aspects: the sourcing strategy, the supplier relationship and the supply network building.

3.3.1. Sourcing Strategy

The sourcing strategy represents an important issue, when it comes to supply network strategies. The sourcing strategy described by Gadde and Håkansson leads to many different questions like the size of the supply base, the choice between single versus multiple sourcing, the sourcing policy and involvement level.¹⁶ Those different questions are presented under the following sections.

3.3.1.1. Size of the Supply Base

The “size of a supply base” is the total number of suppliers a buying firm is dealing with.¹⁷ As Gadde and Håkansson noticed it, the recent reliance of outsourcing has led firms to increase the number of their suppliers. It also has had the effect to increase their total supply costs related to their suppliers’ handling. When the costs of handling large supply base became more function of the suppliers’ number than the direct costs of the purchase, buying firms became more aware of the suppliers’ handling costs.

With the further understanding that single sourcing might in some cases offer better advantages than multiple sourcing, the reduction of suppliers’ numbers through supply base consolidation became a new trend. A supply base’s consolidation provides as a main gain noticeable saving due to the reduction of contact work. It can become a precious advantage since it makes it easier for the company to manage its suppliers and increases its importance to the supplier.¹⁸

3.3.1.2. Single & Multiple Sourcing

The choice between single and multiple sourcing has great impacts on the size of the supply base. As explained by Gadde and Håkansson, buying companies have the choice between two options: the single or the multiple sourcing. “Single Sourcing” is used when one is “relying on only one supplier in the

¹⁵ Gadde & Håkansson, 2001

¹⁶ Ibid.

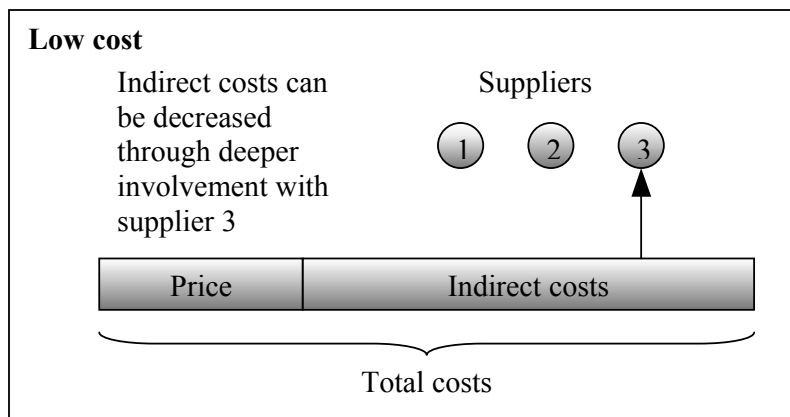
¹⁷ Ibid.

¹⁸ Ibid.

acquisition of a specific item”. “Multiple Sourcing” is used when the buying company relies on two or more suppliers.¹⁹

Historically, the main advantage of *single sourcing* was to increase the bargaining power. Over time however another advantage was revealed: the extensive collaboration with one supplier was often leading to lower total costs. As explained by Asplund E. and Wootz B., when the indirect costs of a purchase are higher than prices and more influencing than prices, the single sourcing is the most relevant sourcing to adopt.²⁰ They illustrate their argument with the following figure. (Figure 3.4.)

Figure 3.4 The Impact of Sourcing Strategy on Direct and Indirect Costs



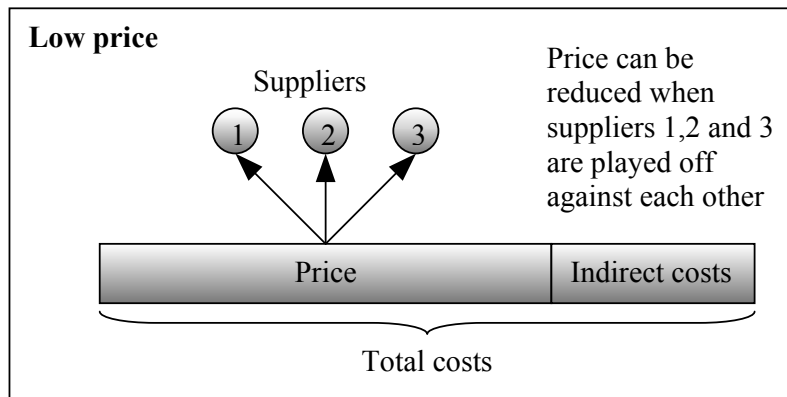
Source: Asplund & Wootz, 1986, pp.61

However, when neither of these conditions is at hand, relying on a *multiple sourcing* has often been viewed as a better solution for the buying firms. For Asplund E. and Wootz B. the main advantages of multiple sourcing are double. One advantage is that it reduces dependence on single suppliers. This allows not only to improve the reliability in flow of goods but also to reduce the risks of being locked into certain technical solutions that could quickly be outmoded. The other advantage is that having multiple sourcing leads to have competing suppliers and as a consequence lowers prices. The authors illustrate this through the following Figure 3.5.²¹

¹⁹ Gadde & Håkansson, 2001

²⁰ Asplund & Wootz, 1986

²¹ Ibid.

Figure 3.5 The Impact of Sourcing Strategy on Direct and Indirect Costs

Source: Asplund & Wootz, 1986, pp.61

Gadde and Håkansson add that “playing the market” can however lead to new substantial costs.²² The bargaining power of buying firms is often dependent on the total business volume they have with their supplier. With multiple sourcing it then becomes difficult to ask suppliers for price negotiations and solutions that are well adapted to the internal conditions of the buying firm. While continuously searching for lower prices, the buying firm might miss the benefit of potential rationalisation and economies of scale in supply handling. Playing suppliers off against each other can therefore be an opportunity, but it is limited to the indirect procurement costs decrease. The choice between single and multiple sourcing is therefore important and determines the sourcing policy chosen by the firm.

3.3.1.3. Sourcing Policy & Level of Involvement

The firm’s sourcing strategy consists of two notions: the firm’s sourcing policy and its level of involvement towards suppliers. Gadde and Snehota insist on the fact that there is no straightforward association between sourcing policy and level of involvement. Those two notions need to be seen as two independent dimensions.²³ This thinking is summarised in the following figure. (Figure 3.6).

²² Gadde & Håkansson, 2001

²³ Gadde & Snehota, 2000

Figure 3.6 Combination of Relationship Involvement and Sourcing Policy

Sourcing policy	Single	#3	#4
	Multiple	#1	#2
		Low	High
		Involvement	

Source: Gadde & Snehota, 2000, pp.313

As illustrated in the Figure 3.6, different opportunities for improving purchasing performance can be provided by each of the four combinations of involvement and sourcing policy.

Cell #1 represents a strategy of low involvement and multiple sourcing policy. It is often applied by firms with a “Price-based mentality” or used to traditional “arm’s length relationships”. It is a strategy recommended when benefits from single relationship are not outweighing costs and when partners interested in high involvement are not available. In other words, this is a situation of pure multiple sourcing.

Cell #4 represents a strategy of high involvement and single sourcing policy. This should be preferred when high-involved relationships are so resource demanding and costly that companies cannot handle too many of them. This is a situation of pure single sourcing.

Cell #3 represents a strategy of low involvement and single sourcing policy. This strategy is relevant when the buyer wants to reduce administrative costs of large supply base and achieve economies of scale while keeping the option of changing to another supplier.

Finally **cell #2** represents a strategy of high involvement and multiple sourcing. This strategy illustrates the case of “parallel sourcing” (that we will develop

here below) and situations when the customers of the buying firm prescribe different sub-suppliers.

Gadde and Snehota explain that until recently the combinations of involvement and sourcing policy that were thought to be the most appropriate were cell #1 and #4. It was even recommended to move from cell #1 to cell #4. However, and while relatively neglected, cells #2 and #3 are today also considered as strategic options.²⁴

The move to cell #2 can be illustrated by the “Parallel Sourcing” phenomenon. Today adopted by Western firms, the Parallel Sourcing has for long time been the characteristic source combination of the Japanese auto industry. This system was offering to combine the benefits of both single and multiple sourcing. In the appearance, it looked like the Japanese assemblers had many sole source suppliers. In reality they had established sole-sourcing suppliers with similar capabilities for very similar components or “parallel sources”. Gadde and Snehota explain that this was done in order to constantly provide performance comparisons and competitive bidding.²⁵ While permitting administrative simplifications due to single sourcing, this strategy was at the same time allowing the enhancement of quality, delivery, technology and pricing of the components due to indirect multiple sourcing.

By only considering the dichotomy between cell #1 and #4, buying firms are narrowing down their strategic scope. One crucial issue here is to find the appropriate relationships combination. But another crucial issue is to understand how these different relevant relationships can be best combined. This leads us to the following part concerning the design of supply network.

3.3.2. Supplier Relationship Management

After the sourcing strategy, the supplier relationships issue represents another issue of importance for supply network strategies. There are four primary aspects, which are important for strategic development of the supplier relationship: relationship classification, relationship monitoring and modifying, supplier interface and motivation and mobilization of supplier. Firstly, it is necessary to understand the different types of the relationship and their continuity. Secondly, monitoring and modifying the relationship is one of the

²⁴ Gadde & Snehota, 2000

²⁵ Ibid.

crucial issues in strategising supplier relationship. The different types of customer-supplier interfaces are the third factor that should be taken into consideration. Finally, mobilization and motivation of the supplier is important for keeping the relationship continuous.

3.3.2.1. Relationship Classification

3.3.2.1.1. *High- and Low- Involvement Relationships*

The customer-supplier relationship is classified in two basic types: high- and low- involvement relationships according to the level of involvement between the customer and the supplier.²⁶

There are three dimensions for relationship classification: activity links, resource ties and actor bonds. *Activity links* concern the procedures, routines and systems between the customer and its supplier. By improving the efficiency in the daily activity towards the physical flow and the paper flow, the “lean” relationships will be possible to be set up. *Resource ties* create values in the supplier relationships. However, in order to take advantage of the supplier’s resources, the customer needs to have deep technical knowledge, which provides the possibility for bonding these resources to its own. *Actor bonds* are related to the attitudes, trust and commitment, which is the key factor for building high involvement relationships, especially for the joint product development project.

The *high-involvement supplier relationship* refers to the relationship characterized by extensive activity links, resource ties or actor bonds. The one for which the three dimensions are all low scored is defined as *low-involvement relationship*.²⁷

Reducing transaction uncertainty, enhancing technological flexibility and gaining price pressure for the suppliers are main three reasons for the MNC to avoid depending on individual supplier with high-involvement relationship. However, with the characteristics of minimized resource ties, weak activity links and limited actor bonds, the low involvement relationship leads to the increase of direct transaction costs and substantial hidden costs since switching

²⁶ Gadde & Snehota, 2000

²⁷ Ibid.

suppliers makes it difficult to routinise exchange activities, and affects direct procurement costs negatively.

High involvement relationships present a different economic consequence model. High involvement reduces costs in production process and material flows and also improves service level and flexibility. In addition, extending involvement provides the possibility for the MNC to take advantages of supplier skills and capabilities. However, high involvement relationships demand substantial cooperation and interaction, which are costly.

Because of the different economic consequences of the two types relationships, it is of importance for the MNC to deal with the relationship between the level of involvement and the interdependence between the MNC and its suppliers.

3.3.2.1.2. Relationship Continuity

The degree of continuity is another important dimension of the relationship, which is not always related to the high involvement relationship. Low involvement relationships would be also long term. The combinations of continuity and different types of relationships in terms of involvement provide the customer different benefits.

In case of high involvement relationship, logic investments to the supplier and the benefits from the high involvement relationship are time consuming. It also takes time for the MNC and its suppliers to know each other before they set up the high involvement and long term relationship.²⁸

The low involvement relationship relying on low continuity provides the possibility to change supplier freely since the switching costs are low. However, there is one combination of low involvement and high degree of continuity. This long-lasting limited involvement relationship, on the one hand, saves the costs for searching supplier information; on the other hand, it leads to concentrate the whole volume of business on one supplier.²⁹

3.3.2.1.3. The Need for Variety in Relationships

As described on the two sections above, the involvement level and continuity degree are two main dimensions of the relationship. The combinations of these

²⁸ Gadde & Mattsson, 1987

²⁹ Dyer et al., 1998

two factors provide the customer four types of supplier relationships in terms of cost and supplier contribution, which are indicated in the Figure 3.7.

Figure 3.7 Relationship Involvement and Continuity

CONTINUITY	High	‘Simple’ Relationships. Continuity makes routinisation possible. Low involvement makes change of supplier easy if necessary.	Complex Relationships. Efficiency improvements through mutual adaptations lead to cost benefits and revenue benefits, which appear over time
	Low	Market Exchange. Increasing efficiency from price pressure – requiring low continuity and low involvement	Complex Buying Situations. Appropriate for procurement of complex systems and equipment, which are bought at irregular intervals.
		Low	High
		INVOLVEMENT	

Source: Gadde & Håkansson, 2001

3.3.2.2. Relationship Monitoring and Modifying

Different supplier relationships lead to different costs and benefits. The level of involvement must be continuously monitored and adapted to changing conditions. Furthermore, modifying the involvement is one of the critical issues in supply network strategies. Without effective supplier relationship monitoring and modifying, the company may be involved in either over- or under-designed relationships. Over-designed relationships may cause unnecessary costs and high risks. On the contrary, under-designed relationships might lead company to lose potential benefits from increasing involvement.³⁰

As one important dimension of supplier relationship monitoring, the supplier performance should be assessed and modified as well. There are two options for avoiding low performing suppliers: changing supplier and assisting supplier to enhance performance. The later is the mostly adapted way, indicating the

³⁰ Bensaou, 1999

most of supplier relationships prefer to the existing relationship in the best way rather than trying to find the potential partner.³¹

3.3.2.3. Customer-Supplier Interfaces

Supplier relationship is a two directions concept. The interaction between customer and supplier determines the performance of the relationship. Any attempt from the buying company to manage the relationship must take the interest of the supplier into consideration.

Different types of customer intervention in the operations of suppliers lead to various impacts on the resource utilization of the supplier. There are four main types of customer-supplier interface. ‘Standardised’ interface means there is no directions and specific connection between customer and supplier; ‘Specified’ interface is related to the relationship that the customer gives precise directions to the supplier on how to produce; ‘Translation’ interface concerns the relationship that the directions given by customer are based on user context and functionality required. This relationship leaves a significant degree of freedom for the supplier to decide the way of meeting the buyer’s requirement. The last type- ‘Interactive’ interface refers to a joint development relationship based on combined knowledge of use and production, which considers productivity consequences and benefits to both parties.³²

The buying company needs a variety of interfaces with its suppliers since each offers different contributions to productivity and innovation. In Table 6.1 (See Appendix), the main contributions to productivity and innovation of different types of interfaces are listed.

3.3.2.4. Mobilization and Motivation of Suppliers

The high involvement relationship demands endeavours from both customer and supplier sides. Therefore, the supplier has to be encouraged and motivated to be involved in the high involvement relationship. By identifying the incentives and assistances offered by the customer, the suppliers secure a long-term business, which thus sharpen its resource utilization and focus on meeting the need of the key customers. Once the suppliers have been mobilized, this

31 Cayer, 1988

32 Araujo et al., 1999

process must be continued in order to maintain the relationship and contribute to performance enhancement.³³

There are a number of methods to motivate and mobilize the supplier. The most important factors for these methods are to build mutual interests, encourage supplier participation and develop trust and commitment.

3.3.3. Supply Network Design

Here we explain some of the main functions a strategic centre has in a supply network, and we develop some important strategic issues regarding the network building.

3.3.3.1. Strategic Centres and Webs of Partners

A strategic centre is a firm that takes a “hub role” in a network structure. It is responsible “for the value creation for its partner as well as being a leader, role setter and capability builder”.³⁴ As Gadde and Håkansson explain it, central firms today expect their suppliers to take initiatives and to be creative on their own. By expecting their suppliers to do more than following the rules, strategic centres are extending their sourcing relationships beyond simple sub-contracting. They are outsourcing what used to be their own activities.

To keep their central position despite of this outsourcing extension, strategic centres need today to develop some core competencies. Central firms core competencies imply the control of some particular capabilities and resources. Gadde and Håkansson define them as “what keeps the network together”.³⁵ Four major notions can further determine the position of a strategic centre: the ideas, the investment, the climate and the partners.

1. The Idea

Strategic centres have to conceptualise business ideas and share them with their partners in order to better lead and orchestrate systems. Such vision is generally dynamic and emerging over time by co-operating with suppliers. They often include the notion of a learning culture and the promotion of systems experiments.

³³ Gadde & Snehota, 2000

³⁴ Gadde & Håkansson, 2001

³⁵ Ibid.

2. The Investment

The development of a brand name and the establishment of a system integrating the network are the two main types of investments. By controlling these investments, the strategic centres get a pivotal role and the legitimisation of their power exercise. However, for that purpose they must have to ensure that the information between partners flows freely.

3. The Climate

The main task of the strategic centres is to “develop a sense of trust and reciprocity in the system”. This task is of utmost importance since “the negative behaviour of only a few can bring the whole system to a halt”.³⁶ Since relationships within the network are expected to be creative and flexible, the sense of trust and reciprocity has to be developed in the whole system, and not in a formal legalistic manner, like by contracts. Through unwritten agreements, partners are mostly expected to work so as to resolve future challenges and difficulties when they arise.

4. The Partners

When organising suppliers network it is of importance to consider which partners should be involved. It is difficult to know in advance which partners are the most appropriate, but a partner profile often emerge over time together with a selection procedure aimed at finding what is missing in the network structure. Co-ordination among all partners, a common long-term perspective, an acceptance of mutual adaptations and incremental innovation are then other key issues.

3.3.3.2. Supply Network Building

Successful supply networks are characterised by three main dimensions closely interrelated: efficient activities pattern, an innovative and value creating resource constellation and a powerful established actor web.³⁷ Building and evaluating an existing supply network is however a complex task, where five principal key issues have to be taken into account:

1. The Activity Structure

In order to build efficient activities pattern firms shouldn't only focus on the single efficiency of their linear supply chain. Instead, their attention should be

³⁶ Gadde & Håkansson, 2001

³⁷ Ibid.

given to as many dimensions as possible so as to get a multidimensional overview of their structure. In that way, firms can get closer to a dynamic network perspective.

2. The Information Flow

The information flow plays a central role in the activity structure. The best and only way to control the activities is to control the information flow. To establish effective network connections, this flow should always be a two-ways direction. Important suppliers should get the possibility to be easily connected to internal information system.

3. The Experimentation of Resource Combinations

Supply network can lead to complex resource constellation. To best deal with these resources, experimentation of resource combination should be stimulated. Both ideas coming from the theoretical sphere and concrete problems and observations should be at the origin of any resource combination.

4. The Number of Participants in Development Projects

The actual tendency to only involve one single supplier to one single project is expected to change. The new challenging network project development should involve more than two companies together so as to get more resources combination in their solution research. To handle such challenging projects, special organisation form might then have to be used.

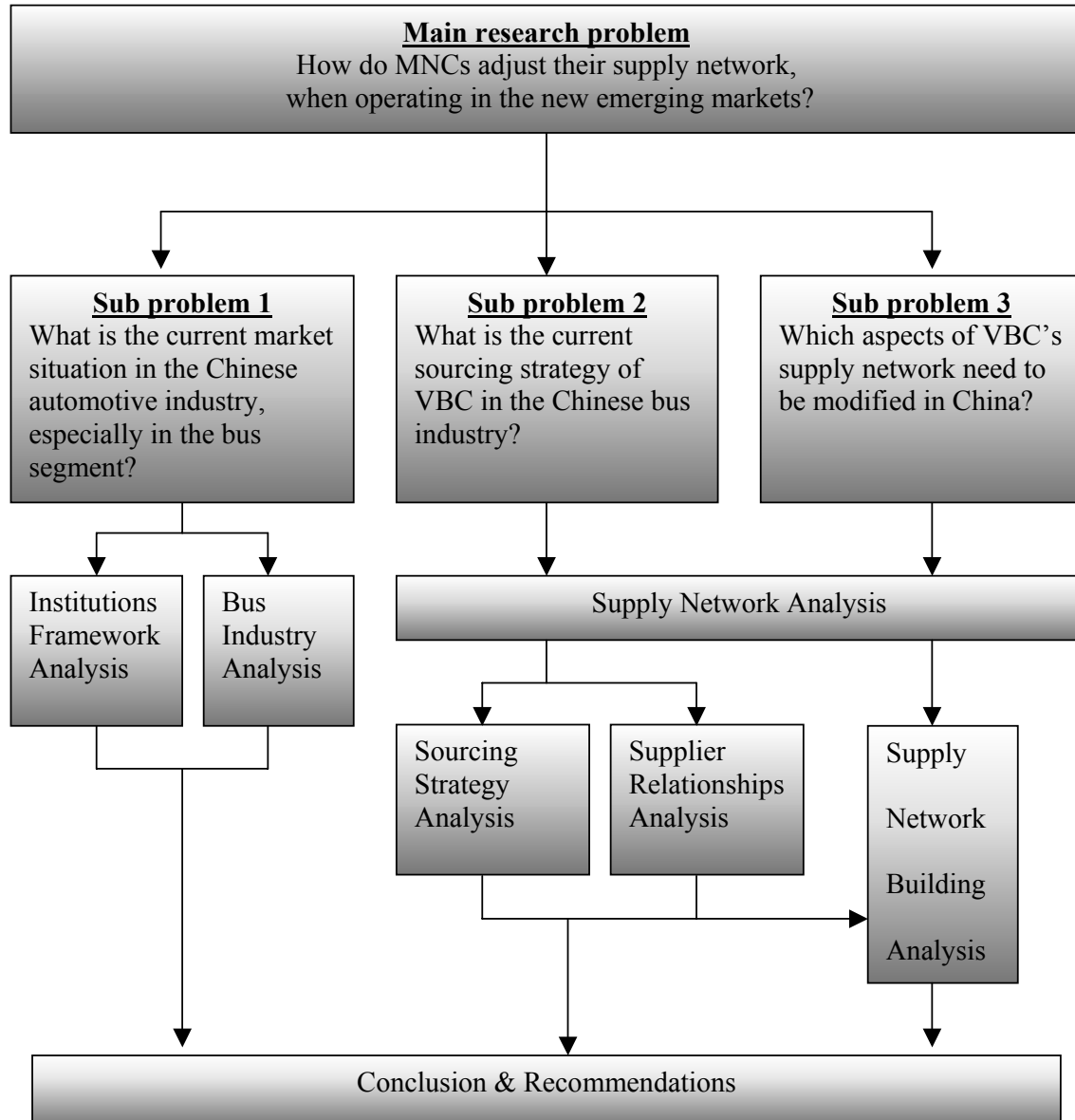
5. The Partners' Commitment

Considering its suppliers as partners is a way to reach a powerful supply network. The development of suppliers association might be a solution to the problem. Such associations have however to be carefully controlled, since they also have the potential to develop into bargaining organisation towards the buying firms. Finally, actors other than suppliers can represent partners. In some cases for instance, customers of the buying firm might represent a better solution.

3.4. RESEARCH MODEL

To visualize how the main problem and three sub-problems are connected to each other, and how they constitute the foundation for the thesis work, we have created our own research model. (See Figure 3.8).

Figure 3.8 The Research Model for Our Thesis



Source: Authors

Chapter 4. EMPIRICAL STUDY

In this chapter, the empirical findings of the study we directed in Sweden and in China are presented. The most important Chinese institutional factors are first presented, followed by a description of the Chinese bus industry and an introduction to our case company, Volvo Bus Corporation. The modified institutional model is applied to present Chinese macro and meso environments. The implications of the societal factors to the organizational fields will however be presented later in the analysis chapter. When describing Volvo Bus Corporation and its suppliers in China, the supply network theory is applied.

4.1. THE INSTITUTIONAL FRAMEWORK OF CHINA

In this section, the societal factors and the organizational fields of China are described based on the modified institutional model we presented in Figure 3.2 in Chapter 3. Only the most essential sectors are discussed. They are presenting the one that we consider as the most relevant when it comes to the Chinese bus industry, VBC and its suppliers. We therefore exclude the less impacting institutions such as family and clan, educational system, professional and interest associations, religion and legal system. The product and service market is briefly introduced, since it will later be developed in-depth in the Chinese bus industry section.

4.1.1. China Societal Factors

Having experienced the last twenty years of development, China's economy has moved from a centrally planned economy to a market-oriented one. However, the political reforms are still lagging behind the economical ones. Today, China faces a growing disconnection between the demands of its reforming economy and political system that is largely ill suited to meet their needs.

4.1.1.1. Political System

The Chinese political system is still entirely dominated by the Chinese Communist Party (CCP). Most senior government positions at all levels of administration are held by the Party members, meaning that the formulating and approval power for the governmental and industry policy are controlled by CCP. Although Chinese leaders have taken some steps toward developing a

political system compatible with market economy, there is disparity between the stagnant political system and the increasingly open economic system.³⁸

The hierarchical structure of the Chinese local governments consists of provinces, cities, townships, and villages. These governments essentially act like a territorial cooperation overseeing the actions of enterprises within their borders. Local governments use regulations and policies to favour the local enterprises thus resulting to local protectionism.³⁹

With China's entry into the WTO in November 2001, the Chinese government made a number of specific commitments to trade and investment liberalization, which, if fully implemented, will substantially open the Chinese economy to foreign firms.

4.1.1.2. Business Moeres and Country Culture

Confucianism and the “Guanxi” concept have a great impact on Chinese culture and business moeres and, in turn, on how business is conducted in China.

Confucianism is an important factor that is deeply affecting the culture of China. Based on two main beliefs: respect for others and obedience to those above you, it emphasises on the definition and the active role of paternity, which automatically creates a hierarchical society.⁴⁰ The concept of “Guanxi” is more the foundation of trustful interpersonal relations in public and private life. “Guanxi” is a reciprocal obligation deriving from any kinship debt: to a family, a career or a business relationship.

Even if it is more “affecting” than representing the Chinese business culture, the corruption issue should not be forgotten. Corruption is presently treated as one of the biggest political and economical challenges for China.⁴¹ Not only the economic reforms but also the Guanxi itself are believed to have provided the opportunity for new corruption development.

Finally, a result of our field trip was that the present day economical transition that China was going through, was deeply affecting firms’ daily business

38 U.S. Department of State, 2001

39 Hennessey, 2002

40 Cio Magasine, 2002

41 Nimerius, 2002

operations. During the interviews we did in the Shaanxi province and in Beijing, we were confronted by people with a very diverse conception of business. In the state-owned companies, the old communist mental model was still predominant whereas in the new privatised firms the mentality was very market oriented. For some of SBC's new privatised suppliers, doing business with state-owned companies was difficult to handle and the collaboration with foreign firms was more appreciated.⁴²

4.1.2. China Organisational Fields

In this section, the organizational fields of China are described based on the modified institutional model, which includes Chinese government, bus product markets, economic system and labour markets. As mentioned before, the product and service market will be presented in the Chinese bus industry section.

4.1.2.1. China Government

China government institutions consist of several levels of bureaucracy tightly controlled by the Communist Party of China. The state intervention in the form of the industrial policies and regulation plays an important role for establishing automotive industry in China, especially bus industry.⁴³

In China, the management of the bus industry is closely related to the government and its influences. Even in the early 80's the central government was maintaining strict control over the industry. The responsibility of bus manufacturers was consigned to the production, while the sourcing issues were controlled by the government.⁴⁴ From the transformation of the central management system, the decentralization and re-concentration of the central government's power on automotive industry can be clearly illustrated. Table 6.2 (See Appendix) lists the major changes in the control structure of the automotive industry.

As an important strategic industry, the automotive industry has been placed as an important pillar industry of China's economy by the Chinese government. The government's primary goal for the automotive sector is to consolidate and rationalize the industry to gain greater efficiencies of scale. The Chinese

⁴² Zhang, interview, 2002

⁴³ Auto in China, 2002

⁴⁴ Sit & Liu, 2000

government policies toward automotive industry have significantly evolved since the mid 80's. This led to four major changes. The first change has been the decentralization of planning power resulting in the strengthening of competition among provinces. Provincial rivalry and protectionism are the major results. The second change has been the shift toward a market economy and a gradual removal of central planning mechanisms. The third change has been the appearance of power establishments acting as an interest unit to bargain with other power groups. These groups of firms were mainly in auto segment and subordinated to an industrial ministry or local government including the First Auto Works (FAW) group, Second Auto Works (SAW) group and Shanghai Automotive Industry Corporation (SAIC). Finally, the fourth change has been the preferential treatment given to Sino-foreign ventures and foreign owned companies. This in turn has encouraged the flux of FDI inflows in automotive industry.⁴⁵

Chinese government policy on automotive-related FDI mainly focused on technology imports in order to accelerate the modernization of the automotive industry at the beginning of the reform in 1980s. The increased demand of imported vehicles in the mid-1980s pushed China to adopt more open policy for encouraging FDI in automotive manufacture by setting up joint ventures with automotive MNCs. However, until the 1990s, China did not have systematic regulations on automotive-related FDI inflow. The regulations used in 1980s have strict restrictions on parts imports and intention for repaid localization, which led to negative influences on attracting more FDI. In 1994, the Chinese government produced the China Automotive Industry Policy, which aims at fostering three or four internationally competitive national automotive corporation groups by 2010. This policy offered for the first time an integrated approach to automotive-related FDI. The clear requirements on the formation of joint ventures with foreign partners were set.⁴⁶

Chinese government policy produces largely influences on automotive industry. However, the acceptance of China by the WTO implies the weakening of the government's protective actions on the domestic automotive industry.⁴⁷

45 Sit & Liu, 2000

46 Ibid.

47 China Automotive Journal, 2000

4.1.2.2. The Product Market

The bus product market will be further presented in the Chinese bus industry section.

4.1.2.3. Chinese Economic System

Launched in 1978, the Chinese transition from a centrally planned economy towards a more market-oriented economy has been stepwise due to the strict Communist control it was operating with. Since 1978 however, the Chinese GDP has quadrupled, the country is now the fastest-growing economy in the world, the sixth largest trading nation, the number one destination for FDI and a member of the World Trade Organisation. While the 1997 Asian financial crisis was shattering many of the region's financial markets, companies and banking systems, China was becoming the best-performing economy in the Asia and Pacific region.⁴⁸

China, which is today often described as the “world's workshop” has also increased its high technology production.⁴⁹ With around 50 per cent of China's imports being materials destined for re-export, the assembly activities have been of utmost importance for China. However, since the foreign enterprises have increased their share of total exports from 1 per cent in 1985 to 50.1 per cent in 2001, management skills, production know-how and technology have also been transferred.

In 2001 China annual GDP growth was reaching 7.3 percent. Mainly driven by the performance of foreign-owned enterprises, the industry sector registered the strongest growth with +8.7 percent while the services sector was growing by 7.4 percent and the agriculture sector only by 2.8 percent.⁵⁰

Due to the strong economic growth and the WTO accession, actual foreign direct investments have increased by 14.9 percent. This was not only an improvement, compared to the 0.9 percent growth in 2000, but this was also the first time China was overtaking the US as the world's leading destination for foreign direct investment.⁵¹ For the coming years Chinese growth is predicted

48 Thornhill, 2002

49 Kyngé, 2002

50 Asian Development Outlook, 2002

51 Kyngé, 2002

to rise, driven mainly by strong domestic consumption and investment, and supported by the WTO accession.

However, China's ability to comply with its important commitments towards the WTO is still in focus. Today, China exports appear strong in general. But around half of them are generated by foreign-invested companies in coastal areas. Away from this booming area, the situation is far from being the same. The Chinese financial system is still lacking in many functions. The Chinese non-performing loans system is today seen as the largest structural weakness. The China's big four state-owned banks, which together hold 70 per cent of China's banking assets, are technically insolvent. Besides, China has been showing years of capital misallocation. Two thirds of China's credit resources that are today channeled toward state-owned companies contribute for just one third of GDP.⁵² The deflationary pressures that tracked China during the Asian financial crisis have reappeared in recent months. Farmers' incomes in many parts of the country are falling. Most manufacturing industries are plagued by overproduction and government debts at over 100 per cent of GDP. The danger here is that the domestic agenda might eclipse the imperative for WTO compliance.⁵³

4.1.2.4. Labour Market

The progressive transition of China toward a market economy has dramatically changed the country labor market conditions. An increasing unemployment and growing income inequality among regions and between urban and rural areas have been some of the negative consequences of the country economy. The main problem here is that China new WTO membership is believed to even strengthen them.

At a time when about 213 million people (23 percent of the rural population) still lives below the international standard of a dollar a day, the 8.5 percent growth in urban incomes is very attractive. The break away from the planed economy led 150 million migrant workers to seek jobs in the booming cities along the coast. But once there, they still have to compete on the job market against tens of millions redundant SOEs workers.⁵⁴

⁵² Kyngé, 2002

⁵³ Financial Times, 2002

⁵⁴ Asian Development Outlook, 2002

With China's accession to the WTO, tariffs in many industries should come down, subjecting firms to more competition. This should not only hit the earnings of some mismanaged SOEs but also reduce the number of jobs created by the relatively dynamic private sector. Although China has already laid off 30 million state workers since 1998, today SOEs employ about 45 million workers out of a total 140 million that are surplus to requirements. This makes some estimate that SOEs may have to shed between 25 million and 40 million jobs over the next decade. The effects of WTO entry on employment are forecasted to be particularly important in the automotive industry, where it is expected to fall at least by 500,000 workers.⁵⁵

Labor unrest is a risk to consider. Manifestation of workers' opposition to reforms of China's vast SOE should not be ignored by MNCs with an interest in China's continued growth.⁵⁶ Today the government is not only expected to slow down its drive to slim down state enterprises but also to imperatively create jobs for an increasingly restive urban population. With around half of the employment opportunities coming from the private sector, the help to private companies' development became an important theme during the November 2002 Party congress.⁵⁷

4.2. THE CHINESE BUS INDUSTRY

Following the Porter Five Forces Model, we identify all the forces that are acting on the bus market in China in this section. To give a better overview of the Chinese bus industry, we will present the suppliers, the buyers, the entrants, the substitutes and the competition on the Chinese bus market.

4.2.1. Suppliers

During the last two decades, the Chinese automotive industry experienced dramatic development. As a consequence, the automotive parts and component industry, which is the supplier for the automotive industry, has also greatly grown. Currently, there are around 5,000 automotive parts and components enterprises in China, among which there is no further distinction among bus, car and truck parts and components firms. Compared to the automotive manufacturing industry, there are no large-scale automotive parts and components firms. Most of them are mid or small scale. In terms of technology

⁵⁵ Financial Times, 2002

⁵⁶ Jacob, 2002

⁵⁷ Kyngé & McGregor, 2002

level and production volume, differences still exist among local suppliers. The great proportions of enterprises are small scale and low in economic effectiveness without any potential for development.⁵⁸

With Chinese economy transiting to a market economy, the purchasing mode of automotive part and component enterprises has been changed, and new actors have emerged in the automotive part and component industry. Today this industry is composed not only of local but also of foreign suppliers.

Compared with international suppliers, the local parts and components firms have cost advantage in the low and mid technology value components segment. Most of local component firms are in the stage of depending on automotive manufacturing firms to provide the component design and specification. The products of most local suppliers are at the similar quality level in this segment. Only quite limited firms can reach the international standard. Due to the heavy competition for the same product with similar quality, local suppliers come to the customers taking all the opportunities to introduce their products. In the high technology value component segment, the prices of local components are even higher than those of MNCs. Technology level and limited production volume are the main barriers for local components suppliers to reduce the cost. Besides, the quality and the capacity related to the delivery time of local components suppliers are still not comparable to those of international suppliers.⁵⁹

In the bus industry, the local suppliers mainly provide the parts and components for the bus body since the technical level and quality of local parts in China are still inadequate. The technical level of domestic chassis is lagging behind international level. Within the body part, the electronic system and bus interior's high valued decoration parts are still the weak points of the domestic supplier products.⁶⁰

However, the local component suppliers are becoming more market orientated. The technology, quality and environment are becoming the priorities for the product development. There are more than 100 local companies, which have already passed the ISO9000 system. Especially the companies, which supply

58 Auto in China, 1999

59 Chen Yzh, Interview, 2002

60 Ibid.

the components to automotive MNCs, for instance, GM, Volkswagen and TOYOTA, have qualified quality inspection system.⁶¹

Currently, all the major foreign bus giants have invested and have planned to invest more in parts production in China. The foreign automotive parts manufacturers have set up several joint ventures in China. Some of the major players are Delphi (US), Lear (US), Visteon (US), Johnson Controls (US), Nippon Denso (Japan), etc.⁶²

In order to improve the competitiveness of local Chinese suppliers and deal with the challenges following the entry of WTO commitment, the Chinese government has recently enacted policies to develop the domestic automotive parts and components firms. The leading enterprises have been supported to merge, acquire and reorganize themselves in order to form the core of the industry. Medium and small parts and components enterprises are being guided to develop toward specialization, in order to form a number of second and third tier elite suppliers. Their target markets are both local and international market.⁶³

4.2.2. Buyers

Along with its fast-growing economy, China has strongly enhanced its urbanisation. Highway and roads networks have been expanding over the nation and domestic tourist business has been booming.⁶⁴ Essentially centred on utility vehicles segment (trucks, military vehicles) during the socialist economy period, the demand has turned to the segment of bus and passenger cars since the 1990s. Year 2001 was very dynamic in the automotive industry with 2.35 million sold vehicles leading to a demand increase of 14.2 percent compared to 2000. The demand is expected to increase at the same proportion in the coming years. The main automotive operators are today geographically concentrated in the Guangdong province, Shanghai area and Jiangsu province.⁶⁵

Among Chinese automotive buyers, the bus buyers are the most important ones. As we can see in the following table (Table 4.1), in 2001 sales were composed

⁶¹ Chen Yzh, Interview, 2002

⁶² Louie and Xu, 2002

⁶³ Auto in China, 1999

⁶⁴ Ibid.

⁶⁵ AsiaPulse News, 2002

for 34.76 percent of utility vehicles, for 34.84 percent of bus and for 30.40 percent of passenger cars.⁶⁶

Table 4.1 Vehicles Sales in China 2001

Types of vehicles	Vehicles Sales in units	Vehicles Sales in percent
Utility vehicles	819 918	34,76%
Buses	821 704	34,84%
Cars	717 190	30,40%
Total	2 358 812	100,00%

Source: Official Statistics, Bureau of Automotive Industry, 2001

The Chinese bus buyers are mainly composed of public buyers like provinces and State.⁶⁷ The acceleration of city construction and extension of urban road mileage has made **public transportation** busier. On the other side, the development of holiday economy and tourism has led to a certain development of the demand for **private buses**. The State disengagement in the economy and the emergence of private consumption is today modifying the profile of the buyers.⁶⁸

The demand for Chinese buses is generally divided into two main areas: the light and mini buses on one side and the large and medium buses on the other.⁶⁹ The following table (Table 4.2) presents how the sales of buses in China were ventilated in 2001.

Table 4.2 Bus Sales in China 2001

Bus category	Bus Sales in units	Bus Sales in percent
Large Buses	11 255	1,37%
Medium Buses	47 189	5,74%
Light Buses	275 477	33,53%
Mini Buses	487 783	59,36%
Total	821 704	100,00%

Source: Official Statistics, Bureau of Automotive Industry, 2001

⁶⁶ Official Statistics, 2001

⁶⁷ Krys, Interview 2002

⁶⁸ Auto in China, 1999

⁶⁹ Ibid.

The demand for large and medium buses is rather low compared to the demand for light and mini buses, with respectively 7 against 93 percent.

The demand of the Chinese bus buyers is mainly affected by two factors: the state policy and the country WTO membership.

State has been considered as a main restraining force in mid-1993, when the central government tightened its credit policy. This led to delay in bus sales, as some buyers had trouble obtaining funds.⁷⁰ Today however, the rules directing the coach's sales are the most important restraining factor. To buy a coach and operate, coach's operators need an individual license issued by the State. The Chinese government only issues further licences when load factors on the roads rise above 70 percent. The licences are then only valid for one specific vehicle on one specific road. Besides, when issuing those licences the government expect the vehicle to be in operation within 6 weeks. If not, the licences are taken away. Because of those operating license conditions, once operators have a licence they need to get a vehicle in operation as soon as possible. These conditions directly explain the high seasonality of the demand and the buyers need for short time delivery.⁷¹ But the State as a main bus customer can also play a positive role for the bus demand. China is, for instance, expected to spend USD 20 billion to clean up Beijing as a prelude to hosting the 2008 Olympic Games. The renewal of the bus park belongs to the planned spending.

⁷²

The WTO factor has been also of importance for the automotive and especially the bus buyers. Since China entered the WTO, tariffs on imported automotive products should drop from a range of 70-80 percent to a range of 50-60 percent. Chinese buyers are also today more quality and cost-conscious buyers, which make them want to pay the same price for the same quality automotive products that people pay in other countries. It is therefore believed that domestic manufacturers will have to become more focused on customer desires.⁷³

⁷⁰ Obert, 1994

⁷¹ McGurk, Interview, 2002

⁷² GCIS, 2000

⁷³ Business Week, 2001

4.2.3. Substitutes

In terms of inter-city transportation, the main substitutes for bus in China are train, ship and aircraft. As one of the most important transportations, train has extensive networks with 22,000 kilometres of track in China. All provinces, autonomous regions, and special municipalities, with the exception of Xizang Autonomous Region, are linked by rail. However, the existing railroad system has not met the transportation needs brought about by rapid economic expansion. The automobile is becoming an increasingly important mode of transportation in China. Up until 2001, China had approximately 1,698 million kilometres of highways, ranking the fourth longest in the world. This includes 19,000 kilometres of expressways, occupying the second position in the world. Water transportation is China's oldest form of transportation. However, due to the natural disadvantage and lack of government investment, the inadequate port facilities are limiting the development of water transportation. China's civil aviation system was developed from the 1980s. By 2001 China had more than 1,54 million kilometres routes, of which 1,009 million were domestic (including Hong Kong and Macau). However, compared with other main forms of transportation, air transportation is characterised by limited connection and higher costs.⁷⁴

In terms of intra-city transportation, the substitutes for bus are taxi, metro system and private car. However, the metro system only exists in the five biggest cities in China. Due to the apparently higher costs, the taxi and private car are not the main transportation for the civil.

4.2.4. Entrants

The first key automotive technology and manufacturing equipment came to China when the government approached the Soviet Union in 1950. by the end of the Sino-Soviet friendship in 1962, China then went on to independently develop its auto-production during two decades. Until the early 1980's the central government was still maintaining strict control over the entrants in the automotive industry. The central or local authorities controlled raw material and final products while firms were responsible only for production.⁷⁵

⁷⁴ Worden, Savada & Dolan eds, 1987

⁷⁵ Sit & Liu, 2000

In the mid 1980's however, diseconomy of scale, narrow model rang, low production capacity and low technological levels characterised the Chinese automotive industry. From 1982 to 1985 for instance, the number of assemblers had doubled while the legal and illegal number of imported vehicles was still rising. The Chinese government then started the most important restructuration of its automotive industry, which modified the entrants' situation in China. The influx of FDI in the automotive industry was then notably encouraged by the preferential treatment for Sino-foreign joint ventures or foreign owned firms.⁷⁶

In order to improve the quality and reliability of the products, the government had thus already started to facilitate the joint ventures with foreign multinationals in the bus industry before the WTO accession. The new entrants on the Chinese bus market were mostly foreigners. China's membership to the WTO, is however expected to definitely open up the country to further competition in the bus industry. There is likely to be a drastic reduction of tariffs for vehicles and components, phased over a five-year period. Local content requirements are planned to be abolished and local manufacturers should be free to choose their joint venture partners instead of having them imposed by the state. This liberalisation is believed to stimulate the market, and facilitate new entrants since it can bring new attractive opportunities.⁷⁷

However, almost all the big foreign bus manufacturers are already in China. Local manufacturers already face stiff competition on the Chinese market. Some 60-70 Chinese bus factories are already producing buses in the country. In fact, the time seems to be more for the reorganisation or the consolidation of the present actors on the market. The Chinese automotive industry is in a situation of notorious overcapacity: 50 percent of the assembly capacities installed are unused. The industry is today searching for optimal volumes susceptible to assure the future profitability of its operations. This reorganisation notably supposes the elimination or the merger of very numerous actors for whom managing significant economies of scale is already out of reach. The orientation of the actual 10th five-year plan (2001-2005) confirms the will of reorganising the automotive industry, which was already announced in 1994. This reorganisation has also been accelerated since the announcement of China's membership to the WTO.⁷⁸

76 Sit & Liu, 2000

77 Obert, 1994

78 Krys, Interview, 2002

4.2.5. Competition

In 2001, the total vehicle production amounted in terms of units to more than 2.33 million in China, which is summarized as follows Table 4.3. Bus, car and truck were almost taking 1/3 of market share each. For 2002, the total production is expected to reach the 3 million units.⁷⁹

Table 4.3 Vehicles Production in China in 2001

Types of vehicles	Vehicles Production in units	Vehicles Production in percent
Utility vehicles	801 779	34,39%
Buses	827 802	35,50%
Cars	702 104	30,11%
Total	2 331 685	100,00%

Source: Official Statistics, Bureau of Automotive Industry, 2001

In the Chinese bus industry, the production was 0.8 million in the year 2001, which is illustrated by Table 4.4. The mini bus segment almost represented 60 percent of the buses production, while the lower production rate was dedicated to the medium and large buses with respectively 5.69 percent and 1.37 percent of the total production.

Table 4.4 Bus Production in China in 2001

Bus category	Bus production in units	Bus production in percent
Large Buses	11 341	1,37%
Medium Buses	47 143	5,69%
Light Buses	277 452	33,52%
Mini Buses	491 866	59,42%
Total	827 802	100,00%

Source: Official Statistics, Bureau of Automotive Industry, 2001

The FDI in the Chinese bus industry began from the middle of 80's, mainly for tourist long distance coaches. In 1986, the first bus joint venture with German company Neoplan was set up. Today almost all the international bus manufacturing companies are already in the Chinese market and have their local production in China.⁸⁰

⁷⁹ Chen Yzh, Interview, 2002

⁸⁰ Ibid.

There are few hundred local bus-makers in China. In terms of technology level, production capability and market share however, only less than 20 companies are important market players. The local bus manufacturers mainly compete on the low and mid value bus segment.

In the large and medium bus segment, the main market players are presented in Table 4.5.

Table 4.5 Large and Medium Scale Bus Companies in China

Company Name	Foreign Partner
Huanghai Auto	No partner
Changjiang Auto	No Partner
Dongfeng Auto	No Partner
Sunwin Bus	Volvo (Sweden)
Xiamen Golden Dragon	Hong Kong Faya Bank
Anhui Ankai	Kassbohrer (Germany)
Jiangsu Yaxing-Benz	DaimlerChrysler (Germany)
Guilin Daewoo	Daewoo (Korea)
Xian Silver	Volvo (Sweden)
Zhengzhou Yutong	Man (Germany)

Source: GCIS, 2000

In terms of production quantity, Huanghai Auto, Changjiang Auto, Dongfeng Auto are the biggest domestic players. However, most of their products are at the lower end of the price scale. The products of joint ventures are mainly luxury coach with high prices. In this segment, Silver and Yaxing Benz are the market leaders.⁸¹

4.3. VOLVO BUSES, OUR CASE COMPANY

Our case company, Volvo Bus Corporation (VBC), is presented in this section. We start by the introduction of VBC, followed by a description of its development in China. Finally, one of the two joint ventures of VBC in China - Silver Bus Corporation (SBC) and its suppliers will be discussed.

4.3.1. Volvo Bus Corporation (VBC)

Volvo, headquartered in Gothenburg, Sweden, is one of the leading suppliers of commercial transport solutions in the world. In 2001, the Volvo Group had

⁸¹ GCIS, 2000

sales of SEK 180.6 billion, with about 71,000 employees globally. Production is carried out in 30 countries, with global organizations for research and service.⁸²

As from 2002, the Volvo Group is organized into eight business areas: Volvo Trucks, Renault Trucks, Mack Trucks, **Volvo Buses**, Volvo Construction Equipment, Volvo Penta, Volvo Aero and Volvo Financial Services. In addition, a number of business units provide Group wide support. The four largest business units are: Volvo IT, Volvo Parts, Volvo Powertrain and Volvo 3P.⁸³

Volvo built its first bus in 1928. Today, VBC is the world's second-largest manufacturer of large buses and coaches. The company offers products for city and intercity traffic as well as route operations and tourist applications. The range comprises complete vehicles, chassis, bus bodies, transport system solutions for metropolitan traffic, leasing, financing and service contract maintenance.

The production of VBC is carried out in Europe, North America, South America and Asia. The company employs approximate 8,900 people world wide, of which 90 percent work outside of Sweden. With the drive of the core values of the VBC “*Quality, safety and care for the environment*”, VBC developed more than 1,300 authorised workshops over 80 countries, which was regarded to be one of the industry's best-developed service organisations.⁸⁴

4.3.2. VBC in China

VBC entered the Chinese bus market at the beginning of 1990s. In 1994, VBC established its first joint venture with Xi'an Aircraft Corporation in Western China – Xi'an. The company called Silver Bus Corporation (SBC) uses an aluminium construction system. Its products are mainly in the long-distance bus segment, such as intercity coaches. With their good quality and services, the products of SBC have earned an excellent reputation for reliability in Chinese bus market.⁸⁵

82 Volvo Corporation Presentation 2001

83 Volvo Annual Report 2001

84 Volvo Buses Presentation 2001

85 Doug, 2002

With its strong international experiences in the bus industry, VBC quickly established a nationwide support network in China and now enjoys very strong brand recognition and customer loyalty. In the coming years, China will become the world's largest market for city buses. In order to secure a place as one of the leading producers in the growing Chinese city bus market, VBC, together with the Chinese vehicle manufacturer Shanghai Automotive Industry Corporation (SAIC), signed a series of agreements in June 2000. A joint venture company called Sunwin Bus Corporation was established in Shanghai. The total share capital of the new company is USD 54.22 Million and the total investment amount to USD 97 Million.⁸⁶

4.3.3. Silver Bus Corporation (SBC) and its Suppliers

We present and discuss SBC and its suppliers in this section. The facts in this section are based on the supplier database provided by SBC and the interviews conducted with SBC and its suppliers in China. The analysis regarding the SBC suppliers will be presented later in chapter of analysis.

4.3.3.1. Silver Bus Corporation

SBC succeeded to create a working team from the beginning of the 50-vs.50 ownership Joint Venture setting up. By continuous efforts from the whole team, common goals, unified ideas and targets are achieved within the organisation.⁸⁷ (See Figure 6.1 in the Appendix)

SBC, as one of the most successful joint ventures of VBC, has a complete business in China, which includes manufacture, product development, marketing, after sales service, sourcing and financing. At present, the production capacity of SBC is 800 vehicles per year. However, due to the fact that the market demand is quite seasonal, the main production takes place particularly in the fourth quarter of the year, which thus requires a short delivery time.⁸⁸

The main products of SBC are B10M series and B7R series coaches. The B12 series is in the design stage and will be launched in the year of 2003.⁸⁹ From the first bus sold in 1995, there are more than 1,300 buses running in the

⁸⁶ Volvo, 2002

⁸⁷ McGurk, Interview, 2002

⁸⁸ Ibid.

⁸⁹ SBC brochure

Chinese markets. Taking advantage of the first mover advantage, SBC developed strong brand reputation. In the high brand value luxury coaches segment, SBC is one of the market leaders. Kassbohrer, Mercedes Benz and Neoplan are the main three competitors in this segment.⁹⁰

SBC developed its own customer base in China, and has already 150 customers. Geographically, the main customers of SBC are located in the wealthy regions of China: Guangdong province of south China and Changjiang delta economic zone of east China.⁹¹

In SBC, the Purchasing Department is subordinate to the technical department. There are two people responsible for components purchasing, two people for Suppliers Quality Assurance (SQA) and one for non-automotive products purchasing.⁹² (See Figure 6.1 in the Appendix)

4.3.3.2. SBC Suppliers

The suppliers of SBC are described following our theoretical framework with regard to the supply network. This means the information follows the present order of the general introduction of SBC suppliers, sourcing strategy, supplier relationship and supply network. Supplier information collections are more focused on local manufacturing suppliers.

4.3.3.2.1. Introduction

In this section, the general information of SBC's suppliers is presented, which includes criteria of SBC supplier selection, the type of supply products, supplier ownership, quality management, geographical location, technological level, interviewed suppliers and an SBC joint purchasing project with Sunwin Bus Corporation.

➤ Criteria of Supplier Selection

The criteria of supplier selection for SBC are the combination of quality, cost and delivery time. There are some other factors that have to be taken into account as well. For some special cases, the customer requirements determine the supplier selection. With little confidence for local components, some customers request for imported parts. However, till now, the quality of the

90 McGurk, Interview, 2002

91 SBC company brochure

92 Yue, Interview, 2002

Silver bus with local components convinced the customers. From the SBC point of view, the company needs to have independent supplier selection right without any customer influences. Moreover, there are no influences from the local government in the supplier selection for SBC.⁹³ When we did our field study in China, all of the interviewed suppliers and SBC believe there were no government functions and interventions in their relationship, (See Table 6.3, table of interviewed supplier, in the Appendix)

➤ **The Type Of Supply Products**

The suppliers of SBC in China mainly provide the components for the body of the bus. The key parts of chassis are imported from Borås Sweden, due to technology and quality consideration. Some parts of chassis like the gearbox, the batteries, the tires and the frames are locally sourced in China. SBC still imports some body components through the VBC Swedish body builder centre (Säffle) since the quality of some local products cannot reach the requirements of SBC. This is, for instance, the case for floor carpets, air conditioner and high quality driver seats.⁹⁴

The following Table 4.6 lists the locally purchased components by SBC, which is based on the interviews with purchasers in SBC. From Table 4.6, one can see that the components for the body are the most locally sourced part.

93 McGurk, Interview, 2002

94 Ibid.

Table 4.6 Major Categories of Locally Purchased Components and Parts by SBC. Percent of Purchases in China, 2002

Commodity	Category	% of Local Purchases
Metals and Alloys	Body and Chassis	49
Seatings	Body	11
Body and Trims	Body	9
Body electrical	Electrical	7
Door systems	Body	5
Glass products	Body	4
Wheels, Tyres, Suspensions	Chassis	3
Transmissions	Powertrain	3
Accessories	Body	3
HVAC	Body	3
Others		4
Total		100

Source: SBC Purchasers, Interview, 2002

Due to the high import costs, SBC is cutting imported part of sourcing. From 1994 to 2002, the sourcing amounts for the imported body parts are reduced from USD 20,000 to USD 2,000. Furthermore, based on low labour cost advantage and higher profit margin gain, SBC is localizing all of the body components sourcing, and increasing the chassis components sourcing in China. The continuous improvements for the quality of locally made components provide the guarantee for local sourcing.⁹⁵

SBC has in total 82 suppliers in China, which include 73 manufacturers and 9 dealers. The biggest 10 suppliers in terms of manufacturer for SBC are listed in Table 4.7. According to this table, the 10 biggest suppliers take 76 percent purchases values of SBC in China. In terms of volumes, the biggest suppliers of SBC are those for glass windows, boards, and toilets. In terms of costs, the most important suppliers are structured parts suppliers, for instance, XAC Shunda Seat Corporation.⁹⁶

⁹⁵ McGurk, Interview, 2002

⁹⁶ Ibid.

Table 4.7 The 10 Largest Suppliers to SBC. Percent of Purchases in China, 2002

Supplier ⁹⁷	Components	Owner ship	Follow Source	% of Purchases Values
Xi'an Aircraft Corporation (XAC)	Steel parts	State	No	26
Sida Mechanism Manufacturing	Aluminium profiles/sheet	State	No	15
XAC Shunda Seat Corporation	Passenger seats	State	No	9
XAC Aluminium Industry	Aluminium profiles/sheet	State	No	5
Changzhou Industry Technical Glass	Laminated glass	Private	No	4
Sino-Germany Beijing Bode Transp.	Doors, incl. mechanism	JV	No	4
Michelin Shenyang Tyres	Wheels and tyres	JV		3
Jincheng GRP Development	Toilets	State	No	3
Shenzhen BiLiFeng Electronic Prod.	Audio systems	State	No	3
Chongqing Qijinag Gearbox Plant	Manual gearboxes	State	No	3
Total				76

Source: SBC Supplier Database and SBC Purchasers Interview, 2002

➤ Ownership

In terms of ownership for SBC suppliers, state owned firms are the majority and take 74 percent of SBC purchases values. (See the following Table 4.8) There are in total 10 joint ventures and 1 MNC out of 73 SBC suppliers. They take 10.1 percent of SBC purchases values. Among these 11 firms, 6 firms are follow-source suppliers. The tyres manufacturing company – Michelin is one of them. Michelin has a manufacture base in northeast of China. With advanced technology and high standard equipment, Michelin provides SBC not only with better technical assistances and services but also cost advantage and shorter delivery time.⁹⁸

⁹⁷ Manufacturing Supplier of SBC

⁹⁸ Xue, Interview, 2002

Table 4.8 Suppliers of SBC in China 2002, by Ownership

Ownership	Number of Suppliers ⁹⁹	% of Purchases Values
State Owned	34	74
Private	28	16
JV with Foreign Firm	10	10
MNC	1	0,1
Total	73	100

Source: SBC Supplier Database And SBC Purchasers Interview, 2002

➤ **Quality Management System**

Table 4.9 illustrates the quality management of SBC suppliers. It shows that out of 73 suppliers, 62 percent suppliers have quality inspection system, such as ISO9000 and QS9000.

Table 4.9 Quality Certificate among SBC Suppliers in China, 2001

ISO/QS Certificate	Number of Suppliers ¹⁰⁰	%
ISO9000	16	22
ISO9001	13	18
ISO9002	13	18
QS9000	2	3
QS207	1	1
No. Certificate	28	38
Total	73	100

Source: SBC Purchasers, Interview, 2002

➤ **Geographical Location**

Geographically, the main suppliers of SBC concentrate on two types of regions: Xi'an area, which enjoys the distance advantage and economic developed areas, such as south China and east China. According to Table 4.10, there are 54 of total 73 suppliers in these two types areas, which take 80 percent purchases values of SBC in China.

⁹⁹ Manufacturing Supplier of SBC

¹⁰⁰ Ibid.

Table 4.10 Geographical Location of SBC Suppliers in China, 2002

	Number of Suppliers ¹⁰¹	% of purchases values
Local suppliers in Xi'an area	31	64
Wealthy areas	23	16
Other suppliers	19	20
Total	73	100

Source: SBC Supplier Database, 2002

➤ **Technical Level**

Generally, the innovation ability and product quality of local suppliers¹⁰² are under improvement, which is due to their low technical level. Lacking advanced equipment and qualified raw material is the other main reason. However, the situation is changing quickly. The reliability of the local suppliers is rapidly improving. Although the labour cost is an advantage for local suppliers, with the same core value of quality with VBC, SBC has not only taken cost factors into consideration.¹⁰³

Considering the global supplier, currently, only Changzhou Industry Technical Glass Co., Ltd. and Sida Mechanism Manufacturing Corporation are potential global suppliers since they are just beginning to provide the samples to Volvo group.¹⁰⁴

➤ **Interviewed Suppliers**

The suppliers' selection for our interviews is based on two factors: SBC purchasing value and type of supply product. The geographical limitation for field study and suggestion from SBC purchasers are also taken into consideration. From Table 4.11, the distribution of interviewed suppliers is illustrated.

101 Manufacturing Supplier of SBC

102 Ibid.

103 Yue, Interview, 2002

104 He, Interview, 2002

Table 4.11 The Distribution of Interviewed SBC Suppliers, 2002

Supplier Rank By purchases	Commodity.				
	Catalogue	Body	Chassis	Electrical	Powertrain
Top 10 supplier of SBC		XAC, Sida Mechanism Manufacture Co., XAC Shunda Seats , XAC Aluminium, Beijing Bode, XAC Hardware	Michelin		
11-20		Xi'an Jiechu			
21-30		Zhonghang Gas Spring			
31-40		Xi'an Linsheng			
41-50					
51-60					
61-73					

Source: Suppliers Interview & SBC Supplier Database

Our interviewed suppliers are presented as follow and are summarised in Table 6.3 (See Appendix).

Xi'an Aircraft Co. (XAC)

XAC is a large state-owned aviation industry enterprise. As the Chinese partner of VBC, XAC has been the biggest supplier for SBC during the period of 1994-2001. XAC has two main categories of products: military and commercial aircraft, and non-aero products. The products provided to SBC are non-aero products taking a small part in the whole product line of XAC. They represent parts and components for the bus body part, primarily including aluminium body structure and side broad in total around 100 types. The company has 21,000 employees in total, with strong technical innovation ability. The automotive project management department of XAC responses for doing business with SBC. The main customers of XAC are in the aircraft field including Boeing and Airbus. In the bus area, SBC is the sole customer for XAC. Before cooperating with VBC, XAC was not involved in bus industry.

Sida Mechanism Manufacturing Co.

Sida Mechanism Manufacturing Corporation is one of the four main sub companies of No. 5702 factory of the People's Liberation Army. Sida has been

accepted by SBC in 2000 as a supplier and became one year after SBC's biggest supplier. Sida is producing two categories of products: military products and industry products. Military products occupy the majority of the company's turnover. Almost all of the company industry products are supplied to SBC, including seats, steel bus body structure, which represent in total 17 categories. In 2001, Sida employed 300 people and its sales turnover was of RMB 0.18 billion, while the business with SBC was occupying less than 1/20. The main customers of Sida are military companies and SBC.

XAC Shunda Seat Co.

XAC Shunda Seat Corporation is a joint-stock company, which has not been listed on the stock market yet, but whose employees and XAC are the main stockholders. The company was approved by SBC as a supplier in 1994. The main products are the seats for bus and planes. In 2001, the sales turnover of Shunda was RMB 30 million, among which SBC purchases were taking 60 percent. However, in terms of quantity, SBC takes 20-30 percent of total production quantity of Shunda. The main customers of bus seat for Shunda are SBC and other local bus manufacturers.

XAC Aluminium Industry Co. Ltd

XAC Aluminium Industry Co. Ltd is a large joint-stock enterprise specialized in the production of aluminum profile, which became SBC's approved supplier in 1995. The products of XAC Aluminum are primarily used in two areas: construction and industry. Presently, the sales of the company mainly come from the construction area. In 2001, the sales turnover with SBC were RMB 7-8 million, which occupies 3 percent of the whole turnover of XAC Aluminium. The main customers of XAC Aluminium are in the construction section.

Beijing Bode Transportation Equipment Co., Ltd.

Beijing Bode was set up in 1997 as a Sino-Germany joint venture, which became SBC's approved supplier in 2001. The products of Bode are automatic door systems and spare parts for transportation vehicles. Currently, train and metro system are the main sections for Bode. In terms of quantity, SBC takes 10 percent of Bode's total production quantity. In 2002, the company had 180 employees, among whom above 30 percent were engineering technicians. The main customers of Bode bus section are both joint ventures and local manufacturers.

XAC Hardware Co.

The company is a state-owned enterprise and a sub company of XAC. The main products of XAC Hardware are of two kinds: components for aircraft and for buses. The last include luggage doors part and aluminium board. XAC Hardware was approved by SBC as a supplier in 1996. Today, the products XAC Hardware provides to SBC represent 25 percent of its total production. The main customers of XAC Hardware come from the aircraft industry. For the non-aero components, SBC is the biggest customer.

Xi'an Jiechu Industry Co. Ltd

The company is a private company, whose main products are water heating system and defrosting system. In 2001 Xi'an Jiechu had a sales turnover of RMB 4 million. For 2002 its sales turnover is expected to be of RMB 8 million. Xi'an Jiechu started to supply heating systems to SBC in 1996 and is its sole supplier for defrosting system. SBC purchases 10 percent of Xi'an Jiechu total production, which represents 20 percent of its sales turnover. The top three customers of Xi'an Jiechu are two state-owned companies and SBC.

Shaanxi Zhongang Gas Spring Co. Ltd

The company is a state-owned company, which has been privatised in 1997. The main products of Zhongang Gas Spring are gas springs for aircraft, computer, subway, bus and military products. The company is the biggest Chinese manufacturer of gas springs with its own technology innovation ability. In the bus segment, 70 percent of the bus manufacturers using its products. Its production capability is of 500,000 pieces per year. In 2001 it had 70 employees and a sales turn over of RMB 20 million. The company became SBC's supplier in 2000. SBC occupies today 4 percent of its sales turnover. In terms of volumes the top four customers are two state-owned companies, a Chinese private company and SBC.

Xi'an Linsheng Plastic Co. Ltd

The company is a private company, which was established in 1992. Its main products are plastic components for textile equipment, pharmaceutical machines and buses. Its production capacity for the bus components is for 2,000 vehicles per year. In 2001 Xi'an Linsheng had 40 employees, with a sales turnover of RMB 3 million. The company became the SBC's supplier in

1995 and was approved in 2000. Its production capability for SBC buses is for 400 vehicles per year. In 2001 SBC was occupying RMB 400,000 of its sales turnover.

Michelin Shenyang Tyres Co.

The company is a Sino-French joint venture, which was established in 1995. In 1997, it began to supply its products to overseas markets. The main products of Michelin Shenyang Tyres are tyres for trucks and buses. The company production capacity was of 200,000 units for bus and trucks. It became SBC's supplier in 2002. The main customers of Michelin Shenyang Tyres are in the Replacement area. Within the Original Equipment Manufacturers area it has almost all the main bus manufacturers as customers.

➤ Joint Sourcing Project

With the ambition of taking advantage of more resources and capabilities of local suppliers in China, and achieving better production volume in terms of quality level, and cost reduction values, VBC is trying to initiate a combining sourcing project between its two joint ventures in China. At present, SBC and Sunwin Bus Corporation have some joint suppliers, for instance gearbox supplier. However, due to the fact that the product segment of SBC and Sunwin Bus Corporation is different, the joint sourcing process is still at the beginning phase.¹⁰⁵ In addition, the cooperation between SBC and Sunwin for joint sourcing is still under-develop. One supplier of SBC tried to contact Sunwin on several occasions and sent the samples to Sunwin. However, the reaction from Sunwin is quite slow and the company is still waiting for the reply from Sunwin.¹⁰⁶ According to our interviews with the suppliers of SBC, all the interviewed suppliers welcome this joint purchasing action of VBC since this implies a bigger business opportunity. But at the same time, most of them express that the practical operation issues of joint sourcing will affect the implementation and result of this project.

4.3.3.2.2. SBC Sourcing Strategy

In the following section we focus our attention on the way SBC is organising its sourcing. The size of SBC supply base is first presented followed by a description of SBC's distribution between single and multiple sourcing.

¹⁰⁵ Yue, Interview, 2002

¹⁰⁶ Zhang, Interview, 2002

➤ Size of Supply Base

SBC had divided its purchasing activities into four main parts also called “Global Commodities”. These four global commodities comprehend the Body, the Chassis, the Electrical and the Powertrain parts. Each global commodity is divided into several “Commodities”, which are further divided into “Sub-commodities”. As shown in the following table (Table 4.12), SBC four global commodities are divided into 23 commodities, which lead to a total of 121 sub-commodities.

Table 4.12 SBC Supply Base in Terms of Commodities in 2001

Global Commodities	Number of Commodities	Number of Sub commodities
Body	11	48
Chassis	6	40
Electrical	3	16
Powertrain	3	17
Total	23	121

Source: SBC Supplier Database, 2002

While some global commodities like the Powertrain and Electrical parts are composed of a reduced number of commodities, the situation is quite different for the Chassis and Body parts. The chassis consists of 6 commodities and the Body consists of not less than 11 commodities. As a consequence the number of sub-commodities for the Body and the Chassis is much higher than for the Electrical and the Powertrain global commodities.

The table below (Table 4.13) is presenting SBC Supply Base in terms of suppliers' number by Global Commodity. As we can see from this table, the number of suppliers is different depending on the Global Commodity we are focusing on. The Global Commodity that is dealing with the lowest number of suppliers is the Powertrain with only one supplier dedicated to this specific part. On the opposite, the Global Commodity that is dealing with the highest number of suppliers is the Body part with not less than 53 suppliers. The Chassis and Electrical part are connected to respectively 8 and 11 different suppliers.

Table 4.13 SBC Supply Base by Global Commodity in Terms of Supplier Number in 2001

Global Commodity	Suppliers Number	Suppliers Percentage
Body	53	72,60%
Chassis	11	15,07%
Electrical	8	10,96%
Powertrain	1	1,37%
Total	73	100,00%

Source: SBC Supplier Database, 2002

In terms of purchasing value, the situation between each Global Commodity differs also widely. This is presented in the following table (Table 4.14). Whereas the Body part is the largest source of costs with 46 percent of the purchasing value, the chassis part only represents one third of this total value, the Electrical part one sixth and the Powertrain less than 2 percent of the total purchasing value.

Table 4.14 SBC Supply Base by Global Commodity in Terms of Purchasing Value in 2001

Global Commodity	Purchase Value in EUR	Purchase Value in percent
Body	20 615 866	46,35%
Chassis	15 252 836	34,29%
Electrical	7 817 634	17,58%
Powertrain	793 166	1,78%
Total	44 479 502	100,00%

Source: SBC Supplier Database, 2002

As a Global Commodity, the Body part is one of the most costly. It is connected to the highest number of suppliers and gathering the largest amount of commodities and sub-commodities.

➤ **SBC Sourcing Policy: Single versus Multiple Sourcing**

As SBC's Director of Technical Department explained us during an interview, SBC sourcing policy was mainly a single sourcing one when the firm was set up in 1994.¹⁰⁷ This situation was mainly due to the joint venture status SBC was

¹⁰⁷ McGurk, Interview, 2002

emerging from, and to the fact that Volvo at that time had not a sufficient knowledge of the local market. As the main partner in the joint venture with Volvo Bus, XAC had received most of the purchasing orders and the rest were purchased to unique suppliers. Over time however, SBC tried to diversify its sourcing policy while still keeping a single sourcing policy for some segments.

In this section we are focusing our attention on SBC's actual use of single versus multiple sourcing. The two following tables are presenting SBC distribution between single and multiple sourcing for each Global Commodity. The situation is described in terms of supplier numbers in the first table (Table 4.15) and in terms of purchasing value in the second table (Table 4.16).

Table 4.15 SBC's Sourcing Policy by Commodity in Number of Suppliers in 2001

Glob. Com.	Single Sourcing		Multiple Sourcing		Total Sourcing	
	in number of suppliers	in % of suppliers	in number of suppliers	in % of suppliers	in number of suppliers	in % of suppliers
Body	12	22,64%	41	77,36%	53	100,00%
Chassis	2	18,18%	9	81,82%	11	100,00%
Electrical	4	50,00%	4	50,00%	8	100,00%
Powertrain	1	100,00%	0	0,00%	1	100,00%
Total	19	26,03%	54	73,97%	73	100,00%

Source: SBC Supplier Database, 2002

Table 4.16 SBC's Sourcing Policy by Commodity in Purchasing Value in 2001

Glob. Com.	Single Sourcing		Multiple Sourcing		Total Sourcing	
	Purchasing Value in EUR	in %	Purchasing Value in EUR	in %	Purchasing Value in EUR	in %
Body	6 190 978	30,03%	14 424 888	69,97%	20 615 866	100,00%
Chassis	1 989 877	13,05%	13 262 960	86,95%	15 252 836	100,00%
Electrical	4 273 390	54,66%	3 544 244	45,34%	7 817 634	100,00%
Powertrain	793 166	100,00%	0	0,00%	793 166	100,00%
Total	13 247 410	29,78%	31 232 092	70,22%	44 479 502	100,00%

Source: SBC Supplier Database, 2002

In terms of supplier numbers as in terms of purchasing value, SBC is focusing on a single sourcing policy for the Powertrain commodity. For the Electrical global commodity the situation is more balanced. In terms of suppliers' number

the single sourcing policy is used for 55 percent of the cases, and in terms of value SBC is reaching the perfect equilibrium with single sourcing costing the same as multiple sourcing.

For the two other global commodities the situation is different. In these two cases, SBC is using a rather multiple sourcing policy to purchase its parts and components. In 77 percent of the Body suppliers are multiple sourced, which represents two third of the purchasing value in this specific global commodity. When looking closer at the body segment however, we can notice that one of the body commodities, i.e., the body accessories are even exclusively purchased through a multiple sourcing policy.¹⁰⁸ For the Chassis part, the multiple sourcing policy is also strongly used by SBC. In more than 80 percent of its suppliers' relationships, SBC is using a multiple sourcing policy, which represents more than 87 percent of the purchasing value in this global commodity.

4.3.3.2.3. SBC Supplier Relationship

The supplier relationship of SBC is described through five aspects: relationship involvement, relationship continuity, relationship monitoring and modifying, SBC-supplier interface and supplier motivation and mobilization.

➤ Relationship Involvement

The main activities between SBC and its suppliers follow the contract. SBC keeps contact with its suppliers mostly by telephone and fax, which is a problem-solving based contact.¹⁰⁹ In practise, due to the fact that the bus manufacturer has higher bargaining power than the part supplier in the Chinese bus industry, some of suppliers have regular communication with SBC through face-to-face meetings and provide regular after sales services. The interaction among the individuals between SBC and its suppliers is contained to purchasing administration, which implies few and limited actor bonds.

According to our interviews with SBC purchasers and suppliers, SBC has limited knowledge regarding the resources of its suppliers. This is however not the case for the two biggest local suppliers, XAC and Sida Mechanism Manufacturing Corporation. Both of these two suppliers are military companies with advanced equipments and technical level compared with other local

¹⁰⁸ SBC supplier database, 2002

¹⁰⁹ SBC purchasers, Interview, 2002

suppliers. XAC is the biggest supplier of SBC due to historical reasons. As the Chinese partner of VBC, XAC automatically became the main supplier when setting up SBC. Before cooperating with VBC, XAC did not have any experience with regard to the manufacture of bus and its components. However, based on its strong technology power in aircraft field, the company produced the bus components for SBC according to the specification provide by SBC.¹¹⁰

As second biggest supplier of SBC, Sida Mechanism Manufacturing Corporation was formally accepted by SBC in 2000. Contrary to XAC, Sida Mechanism Manufacturing Corporation had experiences in bus and part manufacture field. The company has its own bus product, branded Sida, which were even exported to Philippines. By implementing the ‘Just In Time’ system, Sida Mechanism Manufacturing Corporation can guarantee SBC the delivery time of only 2 hours. In addition, Sida Mechanism Manufacturing Corporation has two technical persons at SBC providing in-plant services.¹¹¹

➤ Relationship Continuity

The duration of 73 suppliers’ relationships of SBC is presented in the Table 4.17 Generally speaking, before one supplier is accepted by SBC, it has already provided its products to SBC. But the time for getting the approval from SBC depends on different cases.

Table 4.17 The Duration of 73 Suppliers' Relationship of SBC in 2002

Number of years after approved by SBC as a supplier	Number of suppliers ¹¹²
7-8	13
4-6	21
1-3	39
Total	73

Source: SBC Purchasers, Interview, 2002

➤ Relationship Monitoring & Modifying

The supplier relationship monitoring in SBC is mainly implemented through the supplier performance monitoring, which is executed by SQA engineers through inspecting Parts Per Million (PPM) level. Based on the relationship

¹¹⁰ Wu, Interview, 2002

¹¹¹ He, Interview, 2002

¹¹² Manufacturing Supplier of SBC

monitoring, SBC has modified the relationship with key suppliers.¹¹³ As the biggest supplier and Chinese partner for the setting up of SBC, XAC has high involvement relationship with SBC since eight years. However, as a typical state-owned company, XAC has a lot of conflicts with SBC regarding the price and quality. The company would like to get all the parts business from SBC and charge the same price as the imported parts. SBC has made a great deal of effort in dealing with the conflicts with XAC and now the situation is much better than eight years ago.¹¹⁴ However, the sourcing amounts from XAC have reduced from RMB 80-90 million in 1998 to RMB 50 million in 2001.¹¹⁵

The relationship between SBC and Sida Mechanism Manufacturing Corporation presents another changing pattern. Even if Sida Mechanism Manufacturing Corporation became the approved supplier of SBC in 2000, within two years, the company has already become the second biggest supplier for SBC. Furthermore, Sida Mechanism Manufacturing Corporation is providing seat products for VBC to test, meaning the company is a potential global supplier for VBC.¹¹⁶

SBC only assists the key suppliers to guarantee their performances.¹¹⁷ For instance, a working team with quality controllers and technicians of SBC goes to Sida Mechanism Manufacturing Corporation and works together with the company for 2-3 days, four times a year in general.¹¹⁸ By inspecting the equipment situation, manufacture process and product quality, SBC indirectly assists Sida Mechanism Manufacturing Corporation to improve its performance.

In practice, SBC sends the notice to the supplier and asks for the respective action for solving quality problem. Generally, the supplier can resolve the problem in time.¹¹⁹

➤ SBC-Supplier Interface

Regarding standard products, SBC sources them directly from the supplier. There are no specific directions from SBC to suppliers. This part of suppliers

113 SBC purchasers, Interview, 2002

114 McGurk, Interview, 2002

115 Wu, Interview, 2002

116 He, Interview, 2002

117 Chen Hx & SBC purchasers, Interview, 2002

118 He, Interview, 2002

119 Chen Hx, Interview, 2002

represents a small proportion of SBC's suppliers.¹²⁰ Most of SBC suppliers are exclusive suppliers, meaning SBC gives its design and specification of parts and components to the supplier.¹²¹ According to these specified directions, the suppliers produce the parts for SBC. SBC often modifies and improves the product specification and design, which requires the supplier to take corresponding action. At present, most of suppliers are following the change at SBC.¹²² There are quite limited suppliers working as automotive part professional and offering SBC suggestions from the automotive part manufacturer point of view. SBC has the intention to develop some suppliers, which can work with SBC as partners in terms of jointly develop appropriate parts.¹²³

➤ **Supplier Motivation and Mobilization**

According to our interviews with SBC purchasers and suppliers, SBC has no special motivational programs to strengthen the supplier relationship and develop relationship atmosphere. From this year (2002), SBC will begin to hold annual supplier conference. However, this conference now only functions as an opportunity for SBC to meet all the suppliers and exchange of information at the same time.

4.3.3.2.4. SBC's Supply Network

Our intention in the following section is to describe SBC's supplier structure in terms of network. For that purpose we will present SBC's role as a purchaser and position as a supply network builder.

➤ **SBC Role as a Purchaser**

As explained in the theoretical part (3.3.3.1 Strategic Centres and Web Partners), here we are going to see what SBC's role is in its relations with its suppliers through the four main issues of ideas, investment, climate and partners in SBC's purchasing activities.

• **SBC's Ideas**

When asking to the suppliers what they had in mind when they were thinking about SBC, the single and common answer of all of the suppliers was:

¹²⁰ SBC purchasers, Interview, 2002

¹²¹ Ibid.

¹²² Wang, Interview, 2002

¹²³ McGurk, Interview, 2002

“quality”. From what we understood during our different suppliers’ interviews, SBC is strongly emphasising on the quality issue when dealing with the customers. Apart from this quality issue, no supplier was referring to SBC learning culture or promotion of systems experiments.

SBC was however believed to have an important indirect influence on its suppliers when it came to its business practices. In order to be kept in SBC’s suppliers’ portfolio, suppliers often felt compelled to adopt the same business routines. Due to cultural differences, the adoption of SBC business practices was however, not without difficulties. This was especially the case with some of the state owned companies.¹²⁴ SBC technology sharing was also seen as a part of SBC influence on suppliers, but here suppliers were pointing more at the lack of direct learning from SBC such as suppliers training.

• SBC Investments

Since its establishment in China, SBC has regularly taken part to trade fairs and show events related to the automotive industry.¹²⁵ It has had there a strong image of high quality bus manufacturer. The investments SBC put in keeping this image are however more linked to its positioning in the luxury coach segment than to any particular brand policy by the suppliers. The annual supplier conference that SBC recently held was nevertheless a new attempt of improving its investments in that area.

When it comes to investments in the establishment of a supply system, SBC does not seem to have developed a particular one. The effective informal communication at the root of the joint venture has been a main explanation for its success.¹²⁶ However, since then, no broader communication system has been developed at SBC. The suppliers’ information is today still kept at the individual level of employee knowledge. In the purchasing department this information is centralized by the purchasing manager but divided between two purchasers, who are exclusively working with their own suppliers. One purchaser is specialized in metallic parts, and the other is specialized into non-metallic parts.¹²⁷

¹²⁴ Wu, Interview, 2002

¹²⁵ McGurk, Interview, 2002

¹²⁶ Ibid.

¹²⁷ Yue, Interview, 2002

- **The Climate by SBC**

One of the biggest sources of tension between SBC and its suppliers has been the misunderstanding concerning the order that the suppliers were receiving compared to the orders they were expecting to receive. When SBC for the first time reduced its order to XAC, the state-owned company reacted strongly. When contracting with SBC, XAC had taken it for granted that it would get regular and guaranteed purchases from SBC. The sudden reduction of SBC's purchase order was hard to accept for XAC. Conversely for SBC the purchase reduction was a rational decision since despite numerous reminders, the quality of the XAC production had not reached their expectations.¹²⁸ At the time of our visit however, XAC had improved the quality of the related components and SBC had re-launched its purchases by XAC.

More generally, SBC's strong bargaining power with its suppliers has allowed it to expect flexibility from them while not getting involved too much in the supply relations. This has been at the source of other tension with suppliers that were expecting to get more involved in SBC's business. This was for example the case with a supplier that was willing to enlarge its supply to Sunwin. We know from our interview with the General Manager of this company that they had already been discussing the offer with Sunwin, and that Sunwin's reaction had been rather positive. However, since then the supplier had not received any further answer from Sunwin.

- **SBC Partners/Suppliers**

SBC's actual suppliers are more linked together by the competition they are taking part in than by any activity coordinated from SBC. This is especially the case with the recently privatised companies that are very eager to better position themselves on the automotive parts market.¹²⁹ We had an illustration of this situation during our interview with a private supplier of SBC. This supplier was, some years ago, a second tier supplier. It however quickly reoriented its business toward the production of parts that a SBC's first tier supplier's was used to dealing with. It thus moved from a second tier supplier position to that of first tier supplier. At the time of our interview, the new first tier supplier's production had almost completely replaced one of the previous first tier suppliers.¹³⁰

¹²⁸ McGurk, Interview, 2002

¹²⁹ Zhang, Interview, 2002

¹³⁰ Geng, Interview, 2002

When selecting suppliers, SBC is often looking for some characteristics that can lead a simple supplier to become a real long-term partner. SBC is for example prioritising the suppliers that are able to share its common long-term perspective. If this capacity is considered as one of the most important selection criteria, SBC knows also that this is something very difficult to assess at the beginning of any new relation with a supplier.¹³¹ The acceptance of mutual adaptation is another criteria for SBC when it comes to the supplier selection. The adaptation problem that had been recently encountered with XAC, and that we mentioned earlier, will remind SBC of the importance of this criterion.

➤ **SBC Position as a Network Builder**

If looking at SBC through a network perspective, SBC is to be put at the very beginning of the network building process. It came out from different interviews by SBC suppliers that SBC actual purchasing attention was more often translated into supply chain efficiency considerations than into network considerations. The activity at SBC is still structured according to the traditional and linear supply chain model.

When it comes to its information flow, SBC is showing a rather reduced formal and informal information flow with its suppliers. The internal information flow within SBC is poorly developed in terms of supplier information exchange. It is mainly informal and kept at a personal knowledge level. The external information flow between SBC and its suppliers is not very developed either. No real resource combinations or stimulation towards the suppliers are developed by SBC. If SBC today has some suppliers that are supplying SBC together with Sunwin, this combined activity is however not taking place through a properly combined supply system. Besides, the few suppliers that were interested in potential combined purchase from Sunwin and SBC have until now been left without answer.¹³² Development projects are as a consequence at a very low stage, and when in place, they are mostly leading to rather exclusive relationships. The creation of SBC powerful supply network if planned for the future is therefore, today, not a reality at SBC.

¹³¹ McGurk, Interview, 2002

¹³² Zhang, Interview, 2002

Chapter 5. ANALYSIS OF THE EMPIRICAL RESULTS

In this chapter we present the analysis of our empirical results. Analyses are conducted by following the same order as when the empirical data were presented. We first direct the institutional analysis of China, followed by the Chinese bus industry analysis and the SBC's supply network analysis.

5.1. THE INSTITUTIONAL ANALYSIS OF CHINA

In this part, the societal influences on the organisational fields in China are described and analysed by applying our modified institutional model. We have done this in order to gain a general understanding of the relationship between the societal sector and the organisational fields in China, and to better comprehend their potential impacts on the MNCs in China. Based on the information presented in the chapter of empirical study, the analyses highlight the influences related to bus industry.

5.1.1. The Political System Influence On The Organisational Fields

The Chinese political system influences all of four organizational fields, especially on the government and bus industry. The stagnant political reform in China is the direct reason for the state's protection policy towards some strategic industries, for instance banking, telecommunication and automotive industry. In China, strong state regulation and governance in the form of direct economic intervention policies control the development of the bus industry. The regulation mechanism of economic development is presented in China as a mixture characteristic of both newly adopted market mechanism and legacies of the past command economy. Moreover, the decentralization of planning power and its administrative system, particularly the separation between the relative independence of local governments and government departments, cause different level governments concentrating on protecting each indigenous auto sector. Thus, local protectionism, together with highly protecting state policy, constrains scale economies of bus industry.

The Chinese WTO membership is one possibility for changing the Chinese government's industrial policy for the bus industry. The FDI should be more favoured by government policy, especially on the automotive parts segment. As a result, Chinese automotive part industry should face restructuring, which

could provide the opportunity for VBC to upgrade the appropriate local suppliers to the global suppliers.¹³³

The political system influences economic system mainly regarding privatisation. At China's 16th Party Congress it was pointed out that private ownership would be further protected and developed. This will lead to more financial assistances including state banks' loans provided to private firms, as a consequence, and this will promote and increase the competition ability of private firms. The fast-growing private sector might indirectly produce influences on labour market since it is playing an indispensable role in new jobs creation.¹³⁴

Currently, SBC has 28 private firms as its supplier, which takes 38 percent of supplier numbers and 16 percent of SBC purchases values. (See Table 4.8 Suppliers of SBC in China 2002, by ownership). Accompanying the development of private economy with the government simulation, the technical level and financing abilities of private suppliers will be enhanced. As a consequence, SBC would have more opportunities of selecting appropriate suppliers and further construct a effective supply network.

5.1.2. Business Mores and Country Culture influence on the Organisational Fields

The Chinese culture and business mores indirectly affect MNCs by influencing all the organisational fields that are surrounding them. The influences on the government, the economical system and the product market are developed here.

With its emphasis on the paternity role, the Confucianism is strongly affecting the government as an institution. It has led to a situation where industry regulators are often simultaneously the owners of the companies they are supposed to regulate. Top-level communist contacts for anyone doing business in modern China are therefore still seen as being of importance. The success of the high-technology telecommunications equipment manufacturers is a good example of this symbiotic relationship between government and business.¹³⁵ The main drawback of such situations remains nevertheless the development of

133 Sit & Liu, 2000

134 McGregor, 2002

135 Kynge & McGregor, 2002

numerous corruption cases.¹³⁶ It came out during our interviews that SBC did not feel directly affected by any State or provincial institutions.¹³⁷ We believe that is because SBC had no conflictual situation with them. In fact, by purchasing mostly at a local level, SBC from our point of view, is serving the local economy than affecting it negatively.

Chinese cultural influence can also be found at the economical level. The fact that Chinese State banks are still lending with social besides economical or commercial criteria is, for example, seen as strongly influenced by the Confucianism. In the same way, Chinese culture is believed to influence the way China will implement the numerous commitments it has made, when entering the WTO. As we said in our empirical part, the danger is that the domestic agenda might eclipse the imperative for WTO compliance. The pace of WTO agreements implementation might in turn affect SBC's activity.¹³⁸

Business mores and country culture are also more specifically affecting the product market. The influence of Confucianism can for instance be clearly seen in the actual government plans to merge strong state companies with their weaker counterparts. Chinese government's plans of launching a wave of mergers among the automotive companies, make the Chinese industrial model closer to that of the South Korean Chaebols, which are also strongly influenced by the Confucianism. The problem here lies in the fact that these industrial models have recently showed the inefficiencies they could lead to.¹³⁹ The positive outcomes of such a restructuration are therefore not certain for SBC. Besides, as we understood from our field trip, even if corruption issues have been decreasing, they are still affecting the market.

As we have seen before, the influences of the Chinese culture and business mores are to be particularly taken into account. When doing our field trip, the most apparent sign of Chinese cultural and business mores influence that we saw was by the two big state-owned supplier of SBC. The difference of mental model between these suppliers and SBC was then quite obvious, and had actually already led to some problems.¹⁴⁰ However, these influences were

136 Kynge & McGregor, 2002

137 Mc Gurk, Interview, 2002

138 Kynge & McGregor, 2002

139 Financial Times, 2001

140 Wu, Interview, 2002

much less obvious by other suppliers. The latter generally had a business organization that was quite more similar to SBC's business organization.

Here we mainly focused on the risky consequences that Chinese culture and business mores could have on the MNCs business environment. If correctly taken into account however, they can also lead MNCs to gain crucial advantages.

5.2. THE CHINESE BUS INDUSTRY ANALYSIS

Based on our empirical findings and description of the Chinese bus industry, the threats and bargaining power of the different actors are analysed here.

5.2.1. Bargaining Power of Suppliers

At present the automotive parts and components market is very fragmented. The whole automotive part industry consists of mainly mid and small-scale firms, lacking large-scale markets players. The local suppliers are primarily present in the low technology value segment. The supply substitution is very high since there are no big differences among the products of local suppliers in terms of technology content and quality level. This leads to the high competition among local suppliers. The entering of foreign automotive part firms into Chinese automotive part markets intensifies the competition among the suppliers. This competition strongly affects the capacity of suppliers to bargain towards the automotive manufacturers.

Most of small-scale suppliers only have a short-term business goal, which makes it easy for manufacturer to switch supplier since the relationship is fragile and switching costs are low. The high number of suppliers that are continuously coming to manufacturers represents a large information flow to the manufacturer. This in turns lowers the bargaining power of suppliers. Although the government policies favour automotive part firms to merger in order to form some major market players, the scale of the suppliers are relative small compared with the automotive manufacturers. The threat of forward integration is low.

Therefore, we conclude that the local suppliers in Chinese automotive industry, at present, have a rather low bargaining power compared with automotive manufacturers. Moreover, the relative power of local suppliers differs greatly. The companies with high technical containment for key assemblies and

systems of parts and components (such as brake system, steering system and air-conditioning system) have a relatively higher weight than the companies with low technical level and weak competitiveness.

The fragmented supplier market with low technical level and lack of large-scale suppliers directly affect the SBC supply network building. The scale and technical level of current suppliers makes it hard for SBC to select the suppliers, which is the reason why SBC chose specified supplier interface and restricted the joint product development project. The high bargaining power of SBC assists it to gain cost advantages. However, it led SBC to neglect the creation of trust and commitment, the sharing of its ideas with suppliers, the investment in the supplier relationship and the supplier's motivation.

It is worth mentioning that WTO membership has put pressures on the automotive components industry. The whole industry will be restructured in the coming 5 years mainly by merger and acquisitions. Following the WTO membership and through natural selection and competition, all of the companies without innovation ability and product development capability will be progressively eliminated. However, the prospects for foreign supplier in China are positive because of the liberalization of the market by China's WTO membership.¹⁴¹ We believe the restructuring of the automotive part industry, and more follow source suppliers will provide the chances for SBC to select optimal suppliers and thus maximally utilize the resources of the supplier.

5.2.2. Bargaining Power of Buyers

Even if the bargaining power of bus buyers used to be low in the planned economy, we can see that the situation has progressively changed. Today bus operators have a relative higher bargaining power.

The concentration of bus buyer is rather high. Even if the number of private operators all over China is starting to increase, the Chinese bus customers are still mainly concentrated in the hand of public buyers. The main operators are geographically concentrated in the coastal region and particularly the Guangdong province, Shanghai area and Jiangsu province. SBC's location in the middle of China (Shaanxi province) is believed here to represent a certain drawback for the firm relations with its customers. The purchase orders of the

¹⁴¹ Bates, 2001

bus operators are also quite concentrated. Due to the licensing rules that are directing the coach's sales, the bus operators purchase are highly seasonal and their delivery time requirements very tight. Since the operators cannot spread their purchases throughout the year, their purchases are punctual and of a high volume nature.¹⁴²

The price sensitivity of Chinese buyers is high. The switching costs remain rather high for bus operators. This leads Chinese bus operators to generally keep one single brand for their entire bus park.¹⁴³ With its credit policies or its investment plans, the State policy has often influenced, positively and negatively, the purchases of Chinese operators. The fact that SBC is specialised in one single bus segment represents a drawback. Since the firm's offer is reduced to one single kind of bus, bus operators might in some cases prefer other manufacturers with a larger offer than SBC.

Some operators have recently been trying to influence manufacturer's production, mainly through parts and component content specific requirements. But until now they have not been really successful with their requests. The bargaining power of bus manufacturers is still high in that aspect. This was also the case by SBC. Some buyers had changed to other bus manufacturers because SBC could not answer to their specific content requirements. However, most of them came back after a while.¹⁴⁴

5.2.3. Threat of Substitutes

In terms of inter-city transportation, the substitutions threat with train, ship and aircraft are quite different. The railway is the main competitor for buses in China. This is due to the extensive Chinese railway network. However, the threat of rail transport has been decreasing since the national highway and expressway infrastructure have been upgraded over the past two decades with the extensive efforts by the Chinese government. The increasing scale of cities and the booming tourist business has also led the government to further promote the development of the inter city bus transportation. With regard to other substitutes, the threat of air is low due to lack of facilities, high price and low volume capability. The threat of ship transport is also low due to the natural disadvantage of lacking accessing to all parts in China, However, in

¹⁴² Mc Gurk, Interview, 2002

¹⁴³ Ibid.

¹⁴⁴ Ibid.

terms of safety, aviation and railway transportation are better than road transportation.

In terms of intra-city transportation, the substitutions threat from taxi, metro system and private car are quite limited. The metro systems have only been developed in five main cities of China while taxi and private car are expensive compared with the income of the Chinese citizen.¹⁴⁵

5.2.4. Threat of New Entrants

Since the advantage of established firms over entrant are important, the barriers to entry are rather high in the Chinese bus market.

In legal terms, China WTO membership is expected to open up the country to further competition in the bus industry. Over a five-year period, there is likely to be drastic changes as tariffs reduction for vehicles and components, local content requirements abolishment and free choice of joint venture partners. This liberalisation is believed to stimulate the market, bring new opportunities, further develop the country attractiveness and logically increase the threat of new entrants.¹⁴⁶ However, today some legal requirements like local content and partnership requirements are still being applied. Besides, the local governments' controls over facility transports are increasing protectionism and in turn strengthening barriers to new entrants.¹⁴⁷

In addition to this legal and governmental barrier, numerous other barriers to entry are to be found on the Chinese bus market. For instance, the capital requirement represents an important barrier to entry for the potential local bus manufacturers. For the potential foreign entrants, the economies of scale and product differentiation that have been already achieved by the established firms also represent a handicap.

More generally, the first mover advantage is a very significant advantage in China. The already established firms are today benefiting from cost advantages, access to channels of distribution and different government or legal advantages that could be difficult to grasp today by new entrants. We therefore believe that

145 China Bus, 2002

146 Obert, 1994

147 Krys, Interview, 2002

any bus manufacturer that would like to establish itself in China could today not get the same conditions as SBC had in 1994.

5.2.5. Competition

The Chinese bus market is concentrated even if the level is low. The main market players have occupied the majority of the market share. There are different competitors existing in different market segments. In high value luxury coach segment, the main market players are joint ventures. While in the segment of small and medium-scale bus, the main competition is among the domestic bus-makers. At present, the total production capacity of bus manufactures already exceeds the market demands, however, there are still some gaps in demand since there are no appropriate bus products. As one of the major market players in high value luxury coach segment, SBC faces heavy competition from all the other international bus manufacturers. However, the first mover advantage helps SBC to build the high reputation of the products and thus occupy a priority position to compete with others.

The competition in the Chinese bus industry is heavy. Due to the fact that almost all the main international bus manufacturer are already present in China, the China's WTO membership will not lead to the restructuring of the bus industry. However, the M&A among the local bus makers will start in the coming 5 years.

5.3. SBC'S SUPPLY NETWORK ANALYSIS

In this section, SBC supplier structure is analysed by using the supply network theory of Gadde L-E. and Håkansson. We start by analysing the sourcing strategy of SBC and follow by assessing SBC-supplier relationship. Finally the structure of SBC supply network is evaluated.

5.3.1. Sourcing Strategy Analysis

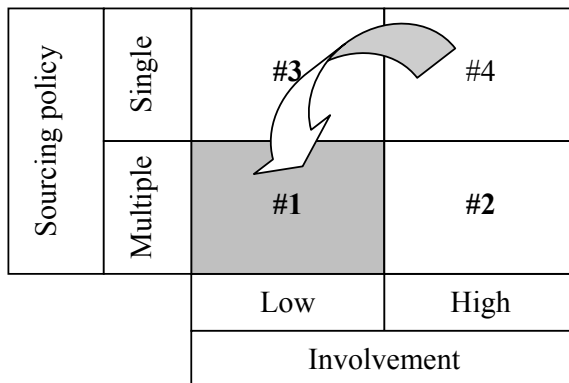
When starting the joint venture with XAC, SBC was quite involved in the relationship with XAC, at that time, a single sourcing relationship with high involvement. However, over time SBC has been lowering its involvement with XAC. More generally, SBC is now trying to distance themselves with the single suppliers it was dealing with at the beginning.

From what we understood during our field trip, SBC is today generally trying to diversify its sourcing policy not only by getting less involved but also by

developing a broader multiple sourcing policy. Except for the Powertrain part that is ruled by a clear single sourcing policy, SBC sourcing policy today remains quite mixed for the body, chassis and electrical parts. SBC is eager to look for other purchasing possibilities and is therefore making more often use of a multiple sourcing policy. The main consequence of SBC's sourcing policy is the enlargement of the size of its supply base.

When trying to position SBC's sourcing policy on the matrix proposed by Gadde and Snehota, we can say that SBC has engaged a move in cells. In a general point of view, SBC can be described as being moving from the cell#4 (cell of single policy and high involvement) to the direction of cell#1 (cell of multiple policy and low involvement). This shift is illustrated in the figure below (See Figure 5.1).

Figure 5.1 Combination of Relationship Involvement and Sourcing Policy by SBC



Source: Modified Gadde & Snehota, 2000, pp.313

SBC is however not entirely in the cell#1. Besides, when it comes to its relationship with joint ventures for instance, SBC has been more moving from cell#4 to cell#3 (cell of single policy and low involvement).

As a global commodity, the body represents not only the part that is gathering the largest amount of commodities and sub-commodities, but also the part that is the most costly and connected to the highest number of suppliers. Since the body segment is the global commodity that is related to the highest amount of locally purchased parts, we will specially focus on this segment.

As we know from the SBC suppliers' database, for the body part SBC is using a single sourcing policy with 30 percent of its suppliers and a multiple sourcing

policy with the remaining 70 percent. (See Table 4.15 & 4.16 in the Empirical part, Sourcing section).

The main advantage of a multiple sourcing policy is to reduce the direct costs of the purchased parts and components. By playing the suppliers against each other, SBC can much easier get lower prices. The multiple sourcing policy also permits SBC to reduce its dependence on one single supplier. During its conflicts with XAC, SBC multiple sourcing policy has enabled the firm to purchase the components from other suppliers until the problems were solved. Since SBC is dealing with a majority of state-owned suppliers where such conflicts could happen, this advantage is of crucial importance. In addition, multiple sourcing policy enables SBC to keep its assembly line in active while in a conflictual situation. It provides the advantage of assuring a reliable flow of goods in spite of unexpected changes in suppliers. Finally, the multiple sourcing policy can reduce the risk of being locked into certain technical solutions. With the actual fast moving Chinese automotive parts market, new opportunities arise every day and make such a factor of the utmost importance.

Considering all the advantages that a multiple sourcing policy could bring to SBC, one could wonder why SBC is not using a sole multiple sourcing policy. A combined sourcing policy could indeed lead SBC to miss the opportunity to grasp all the benefit of a pure multiple sourcing policy. However, the main advantage of SBC policy combination is to lower the risk of getting too much involved in a situation dominated either by single sourcing policy or by a multiple sourcing policy.

The multiple sourcing policy has its drawbacks and the single source policy its advantages. The main risk of the multiple sourcing policy is to increase the size of supply bases and the indirect costs accordingly, which in turn lead to an increase of the total purchasing costs. The single sourcing policy on the contrary enables SBC to keep some costs, like the indirect costs at a quite low level. It can also bring opportunity for potential rationalization and economies of scale in supply handling. More generally with single sourcing, suppliers' adaptations to the internal conditions of the buying firm are much easier to direct. In the perspective of a combined purchasing system between Sunwin and SBC, such advantages are important.

From our point of view, with a combined sourcing strategy, SBC keeps the possibility to adjust its policy to the potential changes of the Chinese supplier market. A combined sourcing strategy can enable SBC to balance the costs of one policy with the benefits of the others and is therefore the most relevant one.

5.3.2. Supplier Relationships Analysis

The supplier relationship analysis is divided into four parts: supplier relationship identification, relationship monitoring and modifying analysis, SBC-supplier interface analysis and supplier motivation analysis.

➤ SBC Supplier Relationship Identification

Based on our interviews with SBC purchasers and suppliers, we conclude that the SBC supplier relationships can be divided into two categories: high involvement relationship with key suppliers and low involvement relationship with other suppliers.

According to three dimensions of activity links, resource ties and actor bonds, the high-involvement supplier relationships refer to those characterized by extensive activity links, resource ties or actor bonds. SBC develops deep technical knowledge with its key suppliers, which facilitates it to take advantage of their resources and provides the possibility for VBC to benefit from global sourcing. Take for instance, Sida Mechanism Manufacturing Corporation. Its experiences in bus and part manufacture and its relatively advanced technology are the resources matching with those of SBC. Regular supplier performance inspection is learning and teaching process for Sida Mechanism Manufacturing Corporation and SBC, through which the resources are bonded to each other. By extending involvement with key suppliers, SBC attains the cost benefits in terms of reduced cost in improved service level and flexibility. However, in our opinion, the current relationship with main suppliers is not costly for SBC since these suppliers are actively taking action for closer cooperation, adaptations and interaction.

For other suppliers, SBC keeps a low involvement relationship, indicated by problem solving based contact model, and limited resource knowledge and actor bonds. By keeping a relationship with weak activity links and minimum resource ties, SBC increases the price competition among suppliers. However, in the absence of tight co-ordination, SBC might needs to create a buffer against possible risks.

According to Table 4.17 (The duration of 73 suppliers' relationship of SBC), there are 13 companies approved by SBC as supplier since 7-8 years, 21 companies since 4-6 years and 39 companies since 1-3 years. One can see that, around 53 percent of the relationships lasted less than three years. Among 13 suppliers with more than 7 years relationship with SBC, only XAC has a high involvement type relationship. However, the involvement degree in this relationship is decreasing. Sida Mechanism Manufacturing Corporation has supplied for a period of less than three years even if its relationship with SBC is of the high involvement type. For other suppliers, none of these relationships are of a high involvement type. Therefore, the low involvement level combined with a low degree of continuity is the main characteristic for SBC supplier relationship. This structure makes possible for SBC to change supplier without problems since the switching costs are low. By managing long-last relationships with limited involvement, SBC avoids high relationship handling costs and increases the price competition among suppliers. As mentioned in the industry analysis section, we believe that the low technical level and innovation ability of local automotive part suppliers in China is an indirect factor for SBC using this low-low relationship structure. However, this 'less face to face communication, less assistance and fewer relation specific investments' relationship pattern restricts SBC to take advantage of local resources and further update local suppliers to global suppliers to VBC.

➤ Relationship Monitoring and Modifying Analysis

The supplier relationship monitoring and modifying is the prerequisite for the company to formulate the sourcing strategy and build supply network. In accordance with our interviews with SBC SQA engineers, SBC monitors the supplier relationship through the inspection of the supplier performances - Supplier Quality Assurance (SQA) system. When supplier performance is perceived as inadequate, SBC gives them some time to change the situation. However, the assistance from SBC to supplier in order to improve performance is quite limited. The quality inspection from SBC can be treated as an indirect method to assist suppliers with performance improvement. Based on our interviews with SBC and suppliers, SBC does not provide technical training for the personnel of suppliers.¹⁴⁸

¹⁴⁸ SBC purchasers, Interview, 2002

Based on our interviews with SBC technical department director and purchasing manager, SBC has modified the relationship towards its key suppliers. With the biggest supplier- XAC, SBC has been modifying its involvement level mainly due to the changes that have occurred in Chinese automotive part market since 1994. After 8 years development, a number of automotive part companies have developed in Chinese market and XAC is not the sole choice for SBC anymore. Benefiting from this situation, Sida Mechanism Manufacturing Corporation has been developed to the second biggest supplier in 3 years.

Finally, by giving the product design and technical specification to the local suppliers that had low technical level and product develop ability, SBC managed to improve their technological capability.¹⁴⁹

➤ **SBC-Supplier Interface Analysis**

According to our interviews with SBC people and its suppliers, the SBC-supplier interface can be concluded as two types: standardized and specified type interface. The standardized interface is only toward the suppliers providing standard products to SBC. Towards other suppliers, SBC has specified interface. Most of suppliers produce parts and components according to the product design and technical specification from SBC. This is a traditional outsourcing model of component manufacturing. In this specified interface pattern, SBC plays an important role and the supplier is used as its capacity reservoir. This pattern limits SBC to gain benefits from suppliers in terms of innovation and productivity since the supplier has limited possibility to influence specification and product design.

Based on the long term thinking, SBC has the intention to have a variety of interfaces with suppliers.¹⁵⁰ However, changing interfaces is not a one- sided affair, no matter how powerful SBC may be, this is always the outcome of mutual decision. Even if most of suppliers have the same intention as SBC, their technical level and innovation ability are today under developed.

149 SBC purchasers, Interview, 2002

150 McGurk & Wang, Interview, 2002

➤ **Supplier Motivation and Mobilization Analysis**

Generally speaking, SBC lacks motivational programs to strengthen the supplier relationship, which is summarized from our interviews with SBC suppliers. This year of 2002, SBC began to hold the annual supplier conference, which provides an opportunity for SBC to meet its suppliers face to face. In addition, due to its powerful situation compared with supplier, SBC does not have any program to mobilize suppliers and to develop trust and commitment with suppliers.

Due to the lack of necessary and efficient motivational and mobilization programs toward suppliers, SBC's long-term goal of global sourcing by taking advantage of local resources would be negatively affected.

5.3.3. Supply Network Building Analysis

To analyse the SBC supply network we try to answer the three main issues regarding the partners that are needed in the network, the information exchange and the co-operation among the suppliers in the network.

Issue #1: Which partners are needed in the network?

SBC is today paying more attention to the reorganization of its supply base but is not yet organized as a network. In order to build its supply network, the question of which partners are needed will be even more important for SBC. The answer to such a question depends, in our opinion, to many different factors. The sourcing strategy could, for example, be differentiated depending on the commodity that is taken in to account, and the technological level of the purchased part or component. When changing its sourcing policy, SBC will have to gain a deeper understanding of which kind of sourcing policy is more relevant. By selecting the right suppliers in its network the remote goal of dealing in a network with global suppliers could be better approached.

Issue #2: Information Exchange

Internally like externally, the information flow at SBC can't be described as an efficient one. The current SBC communication structure mainly stands on the level of personal knowledge. This is a risky situation since the information is more dependent on persons than on an independent system. Individual knowledge has the particularity of being fragile and difficult to share. Without the two main purchasers SBC is relying on, the connection between SBC and

the suppliers could be strongly affected since any system is today backing their operations with the suppliers.

When it comes to formal exchange, the situation is even worse due to the lack of an effective formal exchange system. This is not only a obstacle to the efficient working of the purchasing activity at present but also represents a main barrier for SBC if it is willing to further coordinate its activities with suppliers and combine the suppliers resources in the future.

Issue #3: Co-operation among the Suppliers in the Network

As a consequence of the general lack of information exchange and of effective strategy to develop supply network, there is at present no real cooperation between SBC and the suppliers. While selecting its supplier, SBC does not take into account the potentiality of suppliers' capabilities combination. This in turn cannot have the effect to motivate the suppliers to cooperate with each other.

As it is yet to be developed, the stimulation of interactions between the suppliers is not the most important issue of SBC sourcing strategy. The supply structure is still more considered as a part of a value chain than as part of a well structured supply network. Besides, SBC is not either deeply involved with its first tie suppliers. This might however been explained by two factors: the actual situation of the supply market and SBC's situation in China. The automotive parts and components market is today very fragmented and SBC is still a young joint venture. However, in case SBC and Sunwin would like to present themselves as a one single organization, at least in the purchasing process, they will have to start to organize their suppliers' structure as a real network.

Chapter 6. CONCLUSION, RECOMMENDATIONS AND SUGGESTIONS FOR FUTURE STUDY

The aim of this chapter is to present our conclusions and recommendations. These conclusions are primarily based on the analysis of our empirical results, which are divided in two levels: general conclusions and SBC conclusions, and followed with the recommendations for SBC. At the end of this chapter, the suggestions for future study are presented.

6.1. CONCLUSION

In this section, the general conclusion and SBC conclusion are presented with the aim of answering to our main research problem. The general conclusion answers our first sub problem, and SBC conclusion provides the answer for the two other sub problems.

6.1.1. General Conclusion

The general conclusions regarding the Chinese bus industry and supply network management are presented in this section. We consider them to be applicable not only for our case company but also for other MNCs in Chinese bus industry.

6.1.1.1. Conclusion of the Chinese Bus Industry

With the transition of China towards a market economy, the automotive industry has gained an important place in the country's economy. The bus industry has been rapidly growing since the 80's and it is today aimed at being consolidated and rationalized by the Chinese government.

The customers in bus industry are quite concentrated in the wealthier southern part of China and rather price sensitive. They are mainly constituted of public buyers but the private customers are increasing due to the progressive State disengagement in the economy and the emergence of the private consumption.

Today, some global automotive parts and components suppliers are present in China, but the majority of the suppliers are local suppliers. Even if their production capacity and cost advantage are high, the quality level of their production is still low. The environment of local automotive suppliers is characterized by a high level of competition, a rather short-term thinking and,

for the moment, an insufficient technological and innovation capacity. The supply industry is however in an important period of restructuring.

For the bus manufacturers, importing parts and components in China is rather expensive. But since they can not totally rely on the local parts and components, the final price of buses is still high compared to a similar product on the international market. The Chinese bus market is today dominated by local manufacturers in terms of volume. In terms of value however, all the main international players are represented. The international players are mostly implanted through joint venture. Most of the bus producers are located close to the parts and components areas, i.e., in the Southern part of China and along the coast.

6.1.1.2. Conclusion of Supply Network Management

The MNCs' sourcing strategy and supply network in the emerging market have to be modified in order to be adapted to the changes caused by the economic transition in this area. Based on the supply network analysis of SBC, our case company, we can conclude that the sourcing strategy formulation and modification, the supplier relationship management, and the supply network building are the primary three aspects of supply network that need to be taken into consideration.

➤ **Sourcing Strategy Formulation and Modification**

As the business environment in emerging markets is quite different from developed markets, the formulation and modification of sourcing strategy have to fit to the unique emerging market situation. Supply base and sourcing policy are the main factors for formulating and modifying the sourcing strategy.

The supply base in the new emerging market should be controlled based on the costs evaluation. Sourcing strategies determine the size of supply base. The choice between single and multiple sourcing policies should be based on product characteristics. This can provide the possibility to maximize the utilization of supplier resources and capability. Moreover, it is important for MNC to combine different sourcing policies with appropriate supplier relationships. The resulting sourcing strategy could assist them to achieve better production volume in terms of quality level and cost reduction values.

➤ **Supplier Relationship Management**

Supplier relationship management is one of the important dimensions for supply network management. Before building a supply network in the new emerging market, identifying and managing the current supplier relationship are the preconditions for MNCs to gain the knowledge of their suppliers. This provides the possibility for MNCs to select the appropriate suppliers into their supply network. Effective supplier relationship management can be implemented through four aspects:

Firstly, differentiating high and low involvement relationships with different suppliers. At the same time, different involvement relationships should be combined with different continuity so as to form one supplier relationship structure. Such a structure has to fit to the market situation in the new emerging market.

Secondly, executing the supplier relationship monitoring and modifying. By continuously implementing relationship monitoring and modifying, MNC has to make their supplier relationships fit to the continuously changing environments.

Thirdly, diversifying the supplier interface type. By adopting various supplier interfaces with different suppliers, MNCs can better activate the suppliers and thus take advantage of their resources.

Finally, motivating and mobilizing the suppliers based on the mutual benefits. As the relationship is a two-sides concept, the supplier motivation and mobilization can stimulate the suppliers' interests and therefore keep the relationship healthy and longer.

➤ **Supply Network Building**

To position itself as a strategic centre is very important for MNC to build its supply network. The role of MNC in its supply network decides the efficiency of the information flow and relationship with suppliers. After setting up the supply network, it is also necessary for the MNC to evaluate this supply network through the dimension of efficiency of activity structure with suppliers, information flow, resource combination, the participants' number in development project.

6.1.2. SBC Conclusion

VBC penetrated the Chinese bus markets by setting up SBC in 1994. With its first mover advantage, SBC has succeeded to develop its business and has high reputation for its product quality in China. Based on the analysis of SBC supplier network, we come to the following conclusions.

6.1.2.1. SBC Sourcing Strategy

SBC sourcing policy can be summarized into three main points. We develop them here below.

➤ SBC's Enlargement of its Supply Base

Compared to when it started, SBC has largely increased the size of its supply base. This is particularly true for the body segment, where SBC changed most of its single sourcing policy for a multiple one.

➤ Adoption of a Mixed Sourcing Policy

Even if SBC has increased its use of multiple sourcing, the firm kept a single sourcing policy for some components. SBC multiple sourcing policy is mainly used with local suppliers since the Chinese parts and component market is not mature yet and changing very quickly. With a multiple sourcing policy SBC is trying to keep some flexibility when it comes to its purchasing order.

➤ A Sourcing Policy to be Adjusted

SBC mixed sourcing policy seems to have been organised so as to follow the changes in the Chinese parts and component market. As soon as this market reorganises itself, and that SBC will have found the optimal suppliers to deal with, SBC sourcing policy might have to re-concentrate its supply base. If multiple sourcing is a good way to get low prices and compare the capacity between suppliers, it is also a costly solution. Multiple sourcing can bring high indirect costs and in the long term make it difficult to achieve economy of scales and real partnerships relations.

6.1.2.2. SBC Supplier Relationship Management

SBC has differentiated the high and low involvement relationship with its key and other suppliers. However, the degree of relationship continuity for both high and low involvement relationships is low. Generally speaking, a low involvement level combined with a low degree of continuity is the main characteristic for SBC supplier relationship. This relationship structure limits

SBC to achieve an in-depth knowledge of the suppliers, and negatively affects the suppliers' resources bonding.

SBC monitors the supplier relationships by supplier performance monitoring. The relationship modifying is only toward key suppliers. At present, SBC avoids low-performing suppliers by trying to switch to the alternative suppliers, instead of assist suppliers to improve their performances. However, a lack of qualified suppliers, to a certain degree, restricts SBC switching freely. There are no direct assistance from SBC for improving the suppliers' performance, only indirect assistance for improving performances provided to key suppliers.

Standardised and specified interfaces are main supplier interface types for SBC. However, it lacks interactive interfaces with its suppliers. In addition, SBC lacks supplier motivational and mobilizing programs. Both of these deficiencies illustrate the fact that the relationship between SBC and its suppliers is only a one-direction relationship, and that the interests of suppliers have not been taken into consideration by SBC.

6.1.2.3. SBC supplier structure

➤ **A Lack of Supply Network Perspective**

Until now SBC has been mainly focusing on the efficiency of its supply chain activity. No real supply network perspective has been adopted by SBC. One illustration of this is the fact that in its purchasing activity SBC is focusing on direct and one-way communication with first tiers suppliers. It never takes into account the possibility of combining these resources or influencing the second and third tier suppliers.

➤ **A Reduced Information Flow within the Firm and towards Suppliers**

The internal information flow within SBC is poorly developed since it is mainly informal and kept at a personal knowledge level. Neither has any efficient system put in place to develop the formal information flow. The external information flow towards SBC's suppliers is also quite limited. It is mainly composed of direct and one-way contacts, taken from SBC's initiative. After having approved its suppliers, SBC mainly deals with them through a problem-solving routine. If no problems are encountered with the purchased products, SBC keeps purchasing orders without deepening contacts with

suppliers. This information flow is however not totally irrelevant to SBC's situation since the firm does not yet aim to work as a network.

➤ **Poor Cooperation between SBC and its Suppliers**

As a consequence of SBC activity structure and its information flow, the cooperation between SBC and its suppliers and among SBC's suppliers themselves is practically non-existent. This situation if relevant to SBC's actual sourcing strategy might become problematic if the firm wants to evolve towards a more network turned supply strategy.

Finally, we would like to point out that the bargaining power of suppliers in the Chinese bus industry are low compared with the bus manufacturers. Chinese automotive part industry is not mature, and is experiencing restructuring. But at the same time, even if SBC has already been set up for 8 years, it is still in the first stage of business development. Both of these points provide us with an explanation for the current situation of SBC's supply network in China. However, we believe that SBC is now trying to build its supply network even if it has a long way to go.

6.2. RECOMMENDATIONS TO SBC

In this section, we present our recommendations to SBC regarding its supply network management in China.

6.2.1. *SBC Sourcing Strategy*

The recent enlargement of SBC's supply base is mainly due to the development of its multiple sourcing policy. Since we know that multiple sourcing leads generally to a consequent increase of the indirect cost, we think that SBC should constantly assess the exact costs consequences of the actual sourcing strategy for each commodity. Such direct and indirect costs should be viewed through a long-term perspective.

With this costs assessment in mind, SBC should try accordingly to improve the balance between the single and multiple sourcing. SBC has been working in China since some years. It is not a new joint venture anymore but it is still not mature. Within this transition period, we thought that SBC could benefit from a parallel sourcing policy. SBC should first apply a partial single sourcing policy so as to deepen its relations with some suppliers. At the same time, a parallel multiple sourcing policy could complement its sourcing strategy. This could

help SBC to keep an eye on the emerging and potentially competitive local suppliers.

6.2.2. *SBC Supplier Relationship*

By evaluating the current supplier performance, SBC should select some suppliers to initiate relationship monitoring with them instead of only key suppliers. In addition, it is necessary for SBC to keep close eyes on the continuously changed business environment - Chinese WTO membership is restructuring the auto part industry. Many local auto part firms are disappearing and some are developing into global suppliers. This provides the opportunity for SBC to select appropriate suppliers into its supply network and upgrade the local suppliers to global suppliers.

SBC should develop training programs for selected suppliers or provide the opportunity for working together with suppliers in order to avoid low performance.

SBC needs to vary the supplier interface model. On the one hand, SBC should adopt interactive interface with selected suppliers in order to initiate joint development project. On the other hand, the company should reduce the specified supplier interface based on the consideration of stimulating supplier's interests.

The company has to put more efforts into supplier motivation by establishing some programs and encouraging suppliers to participate and to be involved. The supplier should furthermore be continuously kept motivated.

Creating trust and commitment with suppliers is needed for SBC to improve actor bonds. This is very important for SBC in terms of a long-term thinking. Even if presently, the suppliers are more active in dealing with the business with SBC, the lacks of trust and commitment can negatively influence the network building and the stability of the relationship. This last issue has to be particularly taken into account since commitment and equally treating attitude with the business partner is missing in Chinese business culture. Therefore, putting efforts on these aspects is a long-term task for SBC.

6.2.3. SBC Network Building

In order to further improve its supply structure, the first step for SBC should be to start thinking of itself as being at the centre of a network. Two main changes could be then implemented: the improvement of the information flow and the installation and stimulation of cooperative relationships between SBC and its suppliers.

When it comes to an eventual combination of purchasing order from Sunwin and SBC, the network structure that we recommended for SBC should be applied in a similar way to Sunwin.

6.3. SUGGESTIONS FOR FUTURE STUDY

In this section, we would like to point out a few areas that could be the topics for future research.

- In our research, we focused on the current market situation of the new emerging markets. The analysis done on the institution and industry can enable SBC to understand the current market. We however did not discuss the possible future of the market due to time limitation. Predicting the future changes of the industry and market by developing the scenarios is therefore an area for future research.
- In the analysis of SBC supply network, we have excluded one element, i.e., the organizational structure of the company. A further step in the investigation of the company's organizational structure would be also interesting.
- Commitment and trust are very important for building effective supply network. Different countries have however different business cultures. The further study about how to create commitment and trust in different culture perspectives could be a topic to develop.

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Chen Yuanzhi, Director Trade & Technology Department, China Council for the Promotion of International Trade, Automotive Sub-Council, Beijing, China, October 2002

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Geng Zhijie, General Manager, Xi'an Jiechu Industry Co. Ltd., Xi'an, China, October 2002

He Yujin, General Manager, Sida Mechanism Manufacturing Corporation, Xi'an, China, October 2002

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APPENDIX

APPENDIX 1. VOLVO QUESTIONNAIRE OUTLINE

1. The nature of the supplier (distribution companies or manufacturer)
2. Suppliers ownership
3. The year of Volvo approval
4. SEM score
5. Quality systems
6. Suppliers' total turnover
7. Suppliers type: "Follow-source supplier", "Development supplier", "Global supplier" and "Potential global supplier"
8. Technological assistance from Volvo in terms of product technology and training programs
9. Assistance from Volvo to set up operations
10. Main motives for purchasing among suppliers located at a short geographical distance

APPENDIX 2. SUPPLIERS QUESTIONNAIRE OUTLINE

1. COMPANY DESCRIPTION

- Ownership
- Activity, Product/service
- Production capacity
- Quality
- Price Negotiation
- Sales
- Marketing strategy

2. CUSTOMER RELATIONSHIP WITH VOLVO

- Customers
- Volvo
- Selection process
- Relationship
- Culture
- Practical issues
- SBC joint purchasing project

3. INDUSTRY OVERVIEW

- Bus industry in China
- Future trends

APPENDIX 3. ASSOCIATION QUESTIONNAIRE OUTLINE

1. INDUSTRY OVERVIEW

- Bus industry in China
- Market demand
- Market size
- Ownership
- Production capacity
- Quality level
- Price issue
- Market dynamism

2. RELATIONSHIP BETWEEN BUS MANUFACTURERS AND SUPPLIERS

- Volvo
- Selection process
- Relationship: between bus manufacturer, suppliers and the state
- Culture issues

3. FUTURE TRENDS

- Future Market demand
- China WTO membership

APPENDIX 4. FIGURES AND TABLES

Table 6.1 The Main Contribution of Different Types Interfaces

Interface Category	Customer Benefits Productivity	Customer Costs Productivity	Customer Benefits Innovativity	Customer Costs Innovativity
Standardized	Cost benefits from supplier economies of scale and scope, as well as learning curve effects.	Adaptation to standardized solutions may create indirect costs elsewhere	None	No direct costs. Allows only indirect feedback to suppliers based on sales figures.
Specified	Supplier can pool together similar orders; economies of scale and scope can be attained	Supplier's resource base 'locked in'. limited possibilities to influence specifications.	Minimal (supplier can propose changes to blueprints).	Suppliers used as capacity reservoir. Development of supplier resources may suffer.
Translation	Supplier can propose efficient solutions that improve its own as well as the customer's productivity.	Supplier may reap benefits that are not shared with customer.	Supplier has some leeway to propose innovative solutions.	Supplier may not know enough about customer context to innovate radically.
Interactive	Open-ended exchange allows full consideration of direct and indirect costs for both parties.	Investments in knowledge of how best to make use of existing resources.	Supplier learning about user context opens up the gamut of solutions offered.	Requires investments in joint development and learning.

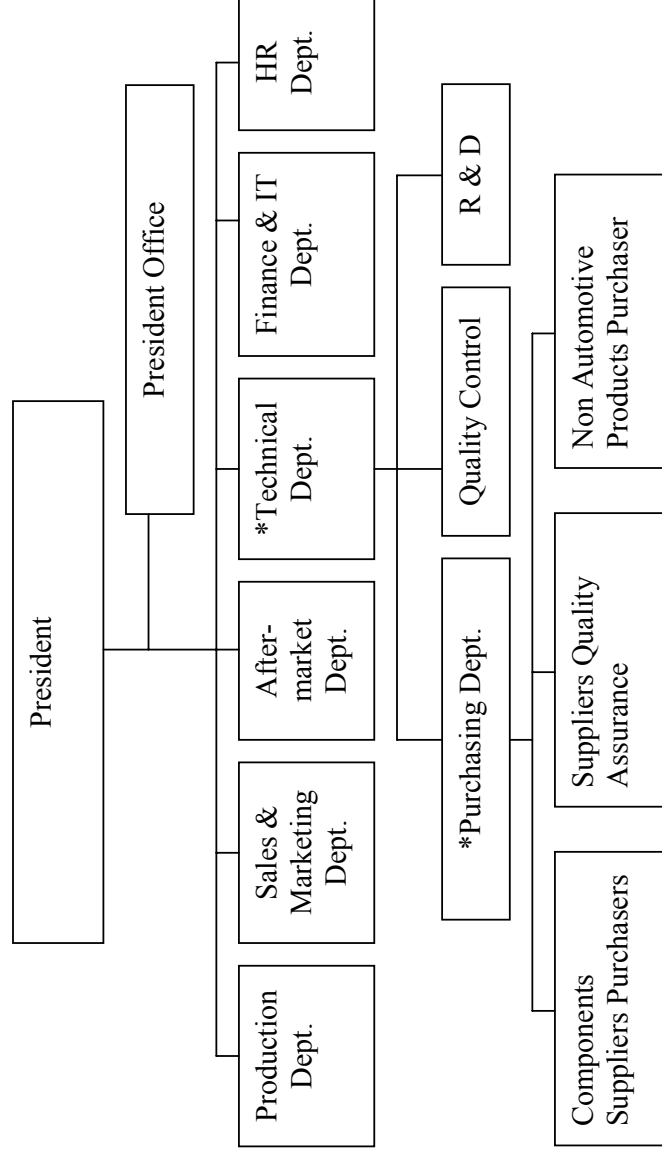
Source: Araujo et al., 1999, p.505

Table 6.2 Changes in the Administrative Authority of the Auto Industry in China

Year	Authority
1952-1964	Bureau of Automotive Industry, the First Ministry of Machinery Industry
1964	China National Automotive Industry Corporation (CNAIC) set up; Bureau of Automotive Industry cancelled
1966	CNAIC dissolved
1966-1976	The First Ministry of Machinery Industry (the Cultural Revolution period)
1976-1982	Bureau of Automotive Industry, the First Ministry of Machinery Industry
1982	CNAIC re-established Bureau of Automotive Industry cancelled
1987	CNAIC dissolved again; China National Automotive Industry Association became the central authority
1989	CNAIC set up for the third time
1993	CNAIC's administration function cancelled, and it became a pure business establishment; Bureau of Automotive Industry set up in the Ministry of Machinery Industry
1998	Bureau of Automotive Industry cancelled as a result of government reform; no central authority replace it

Source: Sit & Liu, 2000

Figure 6.1 Silver Bus Corporation Organization¹⁵¹



Source: SBC, 2002

151 * refers to the person interviewed in China

Table 6.3 Interviewed SBC Suppliers in China

Interviewed Suppliers	Components	Commo. Catalog	Owner-ship	Year of Approval by SBC	Gov. Role for Supply Selection	SBC's Sourcing Policy	Remarks
Xi'an Aircraft Co. (XAC)	Steel parts	Body	State	1994	No	Multiple	1st tier supplier
Sida Mechanism Manufacturing Co.	Aluminium profiles/Sheet	Body	State	2000	No	Single	1st tier supplier
XAC Shunda Seat Co.	Passenger seats	Body	State	1994	No	Single	1st tier supplier
XAC Aluminium Industry Co. Ltd.	Aluminium profiles/sheet	Body	State	1995	No	Multiple	1st tier supplier
Xi'an Jiechu Industry Co. Ltd.	Heating systems	Body	Private	1996	No	Multiple	2nd tier to 1st tier supplier
XAC Hardward Company	Steel parts pressed and welded	Body	State	1996	No	Multiple	1st tier supplier
Xi'an Linsheng Plastic Co. Ltd.	Injection mould	Body	Private	2000	No	Single	1st tier supplier
Shaanxi Zhonghang Gas Spring Co.Ltd.	Gas springs	Body	Private	2000	No	Single	1st tier supplier
Beijing Bode Transportation Equipment Co. Ltd.	Doors, incl. mechanism	Body	JV	2001	No	Single	1st tier supplier
Michelin Shenyang Tyres Co.	Wheels and tyres	Chassis	JV	2002	No.	Single	Follow source supplier

Source: Supplier Interviews in China, 2002